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RECORD—VOLUME 1

I.

APPEAL OF CLARK'S FERRY BRIDGE COMPANY FROM THE FINDINGS, DETERMINATION AND ORDER OF THE PUBLIC SERVICE COMMISSION.

(Filed March 1, 1932)

To the Honorable the Judges of the Superior Court of Pennsylvania:

The petition of Clark's Ferry Bridge Company respectfully represents:

1. That on June 1, 1929, it filed with the Public Service Commission of the Commonwealth of Pennsylvania, and duly posted and published according to law, its tariff P. S. C. Pa. No. 4 fixing rates of toll for the use of its bridge property by the public, which tariff became effective July 1, 1929, and effected reductions in prior established rates.

2. Thereafter on January 14, 1930, The Public Service Commission of the Commonwealth of Pennsylvania instituted an investigation upon its own motion of the reasonableness of the rates fixed by the tariff aforesaid, and on January 16, 1930 served upon Clark's Ferry Bridge Company its order for investigation, a copy of which is attached hereto, made a part hereof and marked "Exhibit A".

3. Thereafter on January 18, 1930, Clark's Ferry Bridge Company filed with said Commission its

answer or reply to said order, a copy of which is attached hereto, made a part hereof, and marked "Exhibit B", wherein it alleged, inter alia, "That the rates established by its tariff P. S. C. Pa. No. 4 are fair, just and reasonable."

4. That the said proceeding was docketed by said Commission as "The Public Service Commission of the Commonwealth of Pennsylvania vs. Clark's Ferry Bridge Company, Complaint Docket No. 8219."

5. That the issue of the reasonableness of the rates of Clark's Ferry Bridge Company under its said tariff P. S. C. Pa. No. 4, became the subject of several hearings and testimony therein was taken before Hon. J. W. Brown, Public Service Commissioner, on March 12, April 10 and December 30, 1930, and on February 25 and 26, 1931.

6. That at said hearings engineers and accountants employed by said Public Service Commission appeared as witnesses, and their examination, as well as the cross examination of the witnesses for the respondent company, was conducted by the Assistant Counsel for said Public Service Commission; and thereafter a brief was filed and the case orally argued before said Commission on behalf of the respondent company. Counsel for the Commission, however, declined to file a brief or participate in the oral argument.

7. That during the pendency of said proceeding, on November 13, 1930, Clark's Ferry Bridge Company filed with said Commission, and duly posted and published according to law, its tariff P. S. C. Pa. No. 5, which tariff became effective November

14, 1930, and effected reductions in prior established rates for certain classes of vehicles.

8. That on February 5, 1932, there was served upon Clark's Ferry Bridge Company, a copy of the report and order of the Commission, which order was dated February 2, 1932.

9. Clark's Ferry Bridge Company, your petitioner, believing itself to be aggrieved by the findings, determination and order of the Public Service Commission made in the proceeding aforesaid, therefore presents to your Honorable Court this, its petition on appeal, as by the Public Service Company Law allowed, and, as required by the said Act of Assembly, herein sets forth specifically and precisely the errors which it assigns to the findings, determination and order of the Commission. A copy of said findings, determination and order of the Commission appealed from is attached hereto, made a part hereof and marked "Exhibit C".

1*st Assignment of Error*:

The Commission erred in its finding and determination as follows:

> "The first complaint against the company's rates was filed shortly after the completion of the company's new bridge, May 30, 1925, the old wooden structure having become inadequate and unsafe, and alleged that the rates then effective were excessive. On June 9, 1926, the Commission issued its report and order in that complaint (*Herring et al. v. Clark's Ferry Bridge Company*, 8 Pa. P. S. C. 61) fixing the fair value of the company's property at $767,800 and requiring that the rates, 25 cents for

ordinary automobiles, be reduced to produce a gross revenue, not exceeding $85,905 a year. The company, however, appealed the decision to the Superior Court and the order did not become effective until March 1, 1927, when the appeal was withdrawn. The Commission's finding of value thereupon became conclusive upon the company and tariff No. 3 was filed, prescribing among others a 15-cent rate for ordinary passenger automobiles and commonly known as the 15-cent tariff."

2nd Assignment of Error:

The Commission erred in its finding and determination as follows:

"A significant factor in the present consideration is that all the new material submitted in this proceeding is a matter of judgment and estimate on the part of appraisal engineers, whereas the finding in 1926 was made almost in its entirety upon actual cost figures as shown by the books of the company and sustained by the testimony of the engineer in charge of the bridge construction. In the absence of evidence that these figures were either abnormal at that time or have become obsolete by reason of changes in price levels or construction conditions, they should carry a very material weight in forming a decision as to the reproduction cost and value of this property at the present time."

3rd Assignment of Error:

The Commission erred in its finding and determination as follows:

"The contention that the contract price does not indicate the true original cost of the structure therefore cannot be accepted."

4th Assignment of Error:

The Commission erred in its finding and determination as follows:

"While the technical burden of proof is not upon it, it would seem that the company in attempting to satisfy the Commission that the prior actual cost of the bridge and the findings of the Commission as of that time are materially lower than the present value of the bridge, has a substantial burden upon it to satisfy that tribunal of the merit of its contentions."

5th Assignment of Error:

The Commission erred in its finding and determination as follows:

"There is nothing in their evidence as to what they deem a reasonable allowance which would compel the conclusion that the Commission's engineer had not allowed an adequate amount for this work, or that the unit cost of $24 per cubic yard bid by the original contractor had been insufficient."

6th Assignment of Error:

The Commission erred in its finding and determination as follows:

"The item (reinforcing steel) is still unnecessarily high, however, in view of prices and conditions prevailing in the steel industry and the cost of steel used in other bridge structures."

7th Assignment of Error:

The Commission erred in its finding and determination as follows:

> "The company's engineer has, however, charged against the moving of the material and the construction of this item, proportions of his total cost of plant and equipment which are greater than the total cost of these materials and which are greater than that charged to any other portion of the work, and are excessive under the circumstances."

8th Assignment of Error:

The Commission erred in its finding and determination as follows:

> "The Commission is of the opinion that if the fill is to be regarded in its entirety as used and useful property, it should be included at a price reflecting its second hand nature, as was done in the prior proceeding."

9th Assignment of Error:

The Commission erred in its finding and determination as follows:

> "The company's engineer has used an interest rate of 8%, although there is no evidence of such a cost. The Commission's engineer has assumed that money could be had for such periods at 6%."

10th Assignment of Error:

The Commission erred in its finding and determination as follows:

> "It is suggested, however, that in addition to interest during construction a further allow-

ance should be made equal to the difference between this amount and the fair return the company would enjoy if its bridge were completed and rendering a public service. This claim, which the company's appraisers call Attached Business Value, amounts in substance to a claim that as soon as a company begins to prepare itself to enter public service, it should be given the full fair return to which it will be entitled after it has made its full investment for this purpose and is actually serving the public. Such a claim cannot be conceded."

11*th Assignment of Error*:

The Commission erred in its finding and determination as follows:

"The company's witness contends that from the very moment the structure was completed it should have been allowed to set aside an allowance in the amount named ($21,210) and hold it free of any claim to the interest on it. At the same time it claims that the value of its property for rate making purposes should be decreased only to the extent of the actually observable deterioration irrespective of what experts may know is the probable future of the structure and irrespective of the greater amounts which have been set aside to retire the structure at the end of its useful life. Clearly such an attitude is inconsistent and cannot be adopted."

12*th Assignment of Error*:

The Commission erred in its finding and determination as follows:

"Having made a complete valuation of this property in 1926 and having ascertained that cost conditions have not changed materially since that time, the Commission is of the opinion that it is not required to reopen the entire question of valuation merely because the company concerned desires it. Nor is there anything in the evidence adduced which is persuasive that in this particular case justice requires a reopening of the prior valuation."

13*th Assignment of Error*:

The Commission erred in its finding and determination as follows:

"Upon a complete examination of the entire record in both proceedings, the Commission is of the opinion and finds that the fair value of the property of the Clark's Ferry Bridge Company is still $767,800 as of this time."

14*th Assignment of Error*:

The Commission erred in its finding and determination as follows:

"It may be noted however that of the $6,000 claimed for officers' salaries, each officer being a stockholder or closely connected with a stockholder, the Commission will, as in the previous decision, allow the sum of $2,400."

15*th Assignment of Error*:

The Commission erred in its finding and determination as follows:

"No claim is made for an allowance of Federal Income Tax, but a rate of return of at least 9% is claimed in view of the alleged un-

usual physical and economic hazards of the property. The Commission will however allow a return of.7% in addition to the allowance of income tax as an operating expense."

16*th Assignment of Error*:

The Commission erred in its finding and determination of the following allowances among the operating expenses:

Officers' salaries	$2,400
Snow removal	200
Light	1,100
Legal service	100
Accountants	200
Postage and printing	200
Hose, Pipe, Telephone & Misc.	400
Insurance	1,700
Federal Income Tax	3,000
Local Tax	50

17*th Assignment of Error*:

The Commission erred in its finding and determination as follows:

"In conformity with the principles stated in dealing with accrued depreciation and its finding of fair value, the Commission will not allow the amount claimed for annual depreciation but will continue the amount named in the previous decision, namely, $7,678."

18*th Assignment of Error*:

The Commission erred in its finding and determination as follows:

"The gross annual revenue which is there-

fore found reasonable is $84,125, made up as follows:

Fair Return	$53,746
Annual Expenses	22,700
Annual Depreciation	7,678
Total	$84,124."

19*th Assignment of Error*:

The Commission erred in its finding and determination as follows:

> "The Commission accordingly finds that the rates of the Clark's Ferry Bridge Company as contained in its tariff P. S. C. Pa. No. 5, are unreasonable and will be for the future, and that a tariff should be filed calculated to produce a revenue of $84,125 per year."

20*th Assignment of Error*:

The Commission erred in making its order which was as follows:

> "Now, to wit, February 2, 1932, it is ordered: That Clark's Ferry Bridge Company file, post and publish, effective thirty (30) days from date hereof, upon not less than one (1) day's notice to the public and this Commission, a new tariff calculated to produce an annual gross revenue of not more than $84,125.
>
> It is further ordered: That said tariff contain as tentative rates intended to produce said gross annual revenue of $84,125, and effective until further action by this Commission or the company in conformity with said determination of allowable gross revenue, the following charges:

(1) A rate of 8 cents cash toll for all ordinary passenger automobiles and wagons now paying 10 cents.

(2) A ticket without time limit salable at the rate of two for 15 cents for all such automobiles and wagons.

(3) A 20-trip ticket non-transferable as between vehicles, good any time within thirty (30) days from date of issue and salable for one dollar ($1) for all such automobiles and wagons.

(4) Rates for all other types of vehicles as are now provided in Tariff P. S. C. Pa. No. 5.

It is further ordered: That said company file with this Commission monthly statements of income and operating expenses, showing the number of vehicles passing over its bridge in each class of traffic as contained in its tariff."

21*st Assignment of Error*:

The Commission erred in fixing the valuation of your petitioner's property, used and useful in the public service, at $767,800, and the findings, determination and order of the Commission are in this respect confiscatory and are in violation of the provisions of the Fourteenth Amendment to the Constitution of the United States, in that the necessary result of said findings, determination and order is to deprive your petitioner of its property without due process of law and to deny to your petitioner the equal protection of the laws.

22*nd. Assignment of Error*:

The Commission erred in restricting the allow-

able gross revenue of your petitioner to $84,125 per year, and its findings, determination and order are in this respect confiscatory and are in violation of the provisions of the Fourteenth Amendment to the Constitution of the United States, in that the necessary result of said findings, determination and order is to deprive your petitioner of its property without due process of law and to deny to your petitioner the equal protection of the laws.

WHEREFORE, your petitioner respectfully prays your Honorable Court to hear and determine this appeal, and to order, adjudge and decree that the order of the Public Service Commission hereby appealed from is unreasonable, not in conformity to law, confiscatory and in violation of the rights guaranteed to your petitioner by the Constitution and laws of the Commonwealth of Pennsylvania and by the Constitution of the United States.

CLARK'S FERRY BRIDGE COMPANY,
By CHRISTIAN W. LYNCH, *President*

State of Pennsylvania,
County of Dauphin, ss:

Personally appeared before me, a Notary Public in and for the county and state aforesaid, Christian W. Lynch, who, being duly sworn according to law, deposes and says that he is President of Clark's Ferry Bridge Company, the petitioner named in the foregoing petition, that he has knowledge of the facts set forth in the foregoing petition and that the same are true and correct, and that the appeal of this petition is not taken for the purpose of delay

but because the petitioner verily believes that injustice has been done.

CHRISTIAN W. LYNCH

Sworn and subscribed before me this 20th day of February, 1932.

ARTHUR W. LEBO,
(Seal) *Notary Public*
My commission expires March 2, 1933.

GEO. ROSS HULL,
SYNDER, MILLER, HULL AND HULL,
210 Walnut Street,
Harrisburg, Pa.,
Attorneys for the Petitioner

Exhibit A.

THE PUBLIC SERVICE COMMISSION
OF THE
COMMONWEALTH OF PENNSYLVANIA

Complaint Docket No. 8219

The Public Service Commission of the Commonwealth of Pennsylvania
vs.
Clark's Ferry Bridge Company

INQUIRY AND INVESTIGATION ON COMMISSION'S OWN MOTION

Now, to wit, January 14, 1930, The Public Service Commission of the Commonwealth of Pennsyl-

vania hereby institutes an inquiry and investigation upon its own motion with respect to the reasonableness of the rates of the Clark's Ferry Bridge Company as contained in its Tariff, P. S. C. Pa. No. 4, and the Secretary is directed to fix hearing in due course, upon proper notice to respondent.

THE PUBLIC SERVICE COMMISSION OF
THE COMMONWEALTH OF PENNSYLVANIA
(Signed) Wm. D. B. Ainey, Chairman

Attest:
JNO. G. HOPWOOD, *Secretary.*

Exhibit B.

THE PUBLIC SERVICE COMMISSION
OF THE
COMMONWEALTH OF PENNSYLVANIA

Complaint Docket No. 8219

The Public Service Commission of the Commonwealth of Pennsylvania
vs.
Clark's Ferry Bridge Company

ANSWER OF THE RESPONDENT

Clark's Ferry Bridge Company, by its attorneys, Snyder, Miller & Hull, Esquires, Harrisburg, Pa., respectfully represents:

That the rates established by its Tariff P. S. C. Pa. No. 4 are fair, just and reasonable, and desires

that a hearing may be fixed in due course for the purpose of taking testimony.

CLARK'S FERRY BRIDGE COMPANY,
By (Signed) SNYDER, MILLER AND HULL,
Its Attorneys.

January 18, 1930.

Exhibit C.

THE PUBLIC SERVICE COMMISSION
OF THE
COMMONWEALTH OF PENNSYLVANIA

Complaint Docket No. 8219

The Public Service Commission of the Commonwealth of Pennsylvania
v.
Clark's Ferry Bridge Company

REPORT AND ORDER OF THE COMMISSION

BY THE COMMISSION:

This proceeding is an investigation upon the Commission's own motion into the reasonableness of the rates of the Clark's Ferry Bridge Company and is the third of a series of proceedings involving this question. The Clark's Ferry Bridge Company owns and operates a toll highway bridge over the Susquehanna River at a point immediately above the confluence of the Juniata River about fourteen miles north of Harrisburg.

The first complaint against the company's rates

was filed shortly after the completion of the company's new bridge, May 30, 1925, the old wooden structure having become inadequate and unsafe, and alleged that the rates then effective were excessive. On June 9, 1926, the Commission issued its report and order in that complaint (*Herring et al. v. Clark's Ferry Bridge Company,* 8 Pa. P. S. C. 61) fixing the fair value of the company's property at $767,800 and requiring that the rates, 25 cents for ordinary automobiles, be reduced to produce a gross revenue, not exceeding $85,905 a year. The company, however, appealed the decision to the Superior Court and the order did not become effective until March 1, 1927, when the appeal was withdrawn. The Commission's finding of value thereupon became conclusive upon the company and tariff No. 3 was filed, prescribing among others a 15-cent rate for ordinary passenger automobiles and commonly known as the 15-cent tariff. The difference between the rate collected by the company under the Court's order of supersedeas pending the withdrawal of the appeal and that found reasonable by the Commission amounted to $32,821.11 represented by redeemable rebate slips issued to persons paying toll. Of this sum only $8,510.10 has ever been paid to holders of these slips, leaving $24,311.01 of excess revenue in the hands of the company.

On April 22, 1929, the Commercial and Industrial League of Harrisburg, Inc., filed its complaint alleging that the rates established by tariff No. 3 were exorbitant and unnecessarily burdensome and in violation of the finding and order of the Commission of June 8, 1926. In its interim report and order

upon this complaint, issued January 14, 1930, the Commission found that the rates were not excessive at the time they were filed, but that the annual reports of the bridge company subsequent thereto showed that the great growth in automobile travel had developed for it a revenue substantially greater than had previously been contemplated in fixing the rate for each vehicle (*Commercial and Industrial League of Harrisburg, Inc. v. Clark's Ferry Bridge Company*, 10 Pa. P. S. C. 174). As the evidence produced by the complainants in substantiation of their complaint was wholly insufficient as a basis for a determination of what was a reasonable rate the Commission thereupon instituted the present investigation on its own motion.

Although the company denied the allegation of unreasonableness as to these rates, it filed, following the hearing on this second complaint, its tariff No. 4, effective July 1, 1929, establishing a 10-cent rate for passenger automobiles and commonly known as the 10-cent tariff. Subsequent to the inauguration of the present inquiry and investigation, the company on November 14, 1930, made effective its tariff No. 5, which contains the prior-existing 10-cent rate for ordinary passenger automobiles but reduces the rates on the higher classifications of motor buses and trucks, so that the highest rates for these became 35 cents and 50 cents, respectively, as compared with the prior rate of 60 cents. Notwithstanding these reductions the present record shows that the gross revenue for 1931 is approximately $137,000.

The history of the present Clark's Ferry Bridge

Company and of the various ferries and bridges which have existed at this site for the last hundred years or more is contained in the two prior reports of the Commission dealing with this company and need not be repeated at this time; both reports of the Commission above referred to are to be deemed to be made part of this report by this reference and the material findings made there are to be regarded as though made herein. In addition to the matters of corporate history, there set forth, it may be noted that subsequent to the making of those findings, the Company has redeemed, mostly at 103½, the entire remainder after previous sinking fund retirements of its original issue of $450,000 of 6% First Mortgage Bonds sold to the public at 94. This was accomplished by the issuance on December 14, 1929, of $450,000 of new 6% First Mortgage Bonds to be pledged as collateral, the funds borrowed thereon to be used to retire the old issue. From time to time the new bonds were to be released and sold at 102½ and accrued interest. As of December 31, 1929, the total outstanding bonds of the new issue amounted to $269,500.

As was indicated in the Commission's report upon the second complaint, the growth of business since 1926 had so substantially increased the bridge company's gross revenue as to indicate that it was enjoying an unusually large return unless its annual expenses or capital investment had likewise increased to an extent not indicated in its annual reports. The present investigation was therefore begun relying upon the finding of fair value as made in 1926 and studies were made of the adjustments which

might be necessary by reason of additions to capital, the depreciation of the structure during the intervening period and any changes in the annual expenses of operation and maintenance. The Commission rested its case upon a presentation of its findings and conclusions in the earlier case, the intervening annual reports of the company and a report of its accountants covering their examination of the corporate books. The company, however, presented in defense a complete independent estimate of the reproduction cost new and depreciated of the entire property, together also with elaborate studies of prospective losses in business as a result of the development of the new state highways. Based primarily upon this appraisal the company now claims a total present value of $1,029,297 as compared with the finding of fair value of the Commission in the decision of June 8, 1926, in the amount of $767,800. The Commission consequently directed its engineering staff to make an independent field study of the property and present an appraisal which would check that of the company's engineers. The investigation has consequently developed into a complete reexamination of respondent's property and an effort on respondent's part to procure an entire reconsideration, as of the later date, of the decision of the Commission made in 1926. The record of the old case as printed for appeal is made part of the present proceeding.

A significant factor in the present consideration is that all the new material submitted in this proceeding is a matter of judgment and estimate on the part of appraisal engineers, whereas the finding in

1926 was made almost in its entirety upon actual cost figures as shown by the books of the company and sustained by the testimony of the engineer in charge of the bridge construction. In the absence of evidence that these figures were either abnormal at that time or have become obsolete by reason of changes in price levels or construction conditions, they should carry a very material weight in forming a decision as to the reproduction cost and value of this property at the present time.

The company endeavors to overcome this difficulty by contending, as it did in the old case, that the building contractor lost money on the work and that the true cost of the bridge is the cost to him. It also presented independent estimates of its present engineers. The evidence in both the old case and the present shows that the bridge was actually built on contract let upon competitive bidding and that the contractor did lose money upon it. It appears also, however, that this loss was due to the fact that the river was in unusual flood condition in September, 1924, and that the entire loss incurred was the result of the delay and loss of equipment caused by the flood. The contractor's auditor testified that except for this loss his company would have shown a profit on the work. The contention that the contract price does not indicate the true original cost of the structure therefore cannot be accepted. The finding of fair value of the Commission in the prior decision more nearly represents the actual original cost of the property.

It is a matter of general knowledge of which the Commission can properly take cognizance that gen-

eral construction costs are not higher than in 1924, but have decreased slightly. The company's appraisal engineer testified that in his opinion the cost of concrete work had not changed materially from 1924 to the date of his appraisal, September 1, 1929, some items of cost having dropped slightly but others having increased. The estimate of Commission's engineers, intended to reflect prices current during the last three months of 1930, but without considering what was thought to be the full extent of depression prices, is accompanied by tables showing just what decreases in price levels had occurred at the date of the company's appraisal and subsequently. It appears conclusively that no increases in price levels have appeared but that some decreases have occurred, particularly since 1929. While the technical burden of proof is not upon it, it would seem that the company in attempting to satisfy the Commission that the prior actual cost of the bridge and the findings of the Commission as of that time are materially lower than the present value of the bridge, has a substantial burden upon it to satisfy that tribunal of the merit of its contentions.

The greatest differences between the estimate of the engineers are in the intangible items. In the physical property the chief points of disagreement are the concrete in arch rings, spandrel walls and other similar parts, reinforcing steel, coffer dams and pumping, and the approach fills, abutments and walls adapted from the old bridge.

The original estimates and bidding calculations divided the bridge structure arbitrarily into a number of items, unit prices being submitted for each

one. The largest single unit is the approximately 9500 cubic yards of Class A concrete in the concrete item mentioned, for which the company's appraiser has allowed $267,312. He has adopted a unit cost of $28.15 per cubic yard for this item and the Commission's engineer has adopted a unit cost of $26. Both engineers have demonstrated the composition of their figures both as to labor and materials and as to the actual concrete and the necessary forms. There is nothing in their evidence as to what they deem a reasonable allowance which would compel the conclusion that the Commission's engineer had not allowed an adequate amount for this work, or that the unit cost of $24 per cubic yard bid by the original contractor had been insufficient.

For reenforcing steel, respondent's engineer has allowed $.0637 per pound based on shipment from Pittsburgh. The Commission's engineers' unit cost is $.046 per pound. The company in its brief on file concedes that in view of the availability of steel markets in the vicinity of Harrisburg its claim for a cost based on a shipment from outside this territory should not be allowed. The item is still unnecessarily high, however, in view of prices and conditions prevailing in the steel industry and the cost of steel used in other bridge structures.

For the direct cost of material and labor in constructing and maintaining the necessary coffer dams and generally taking care of the water conditions involved in the work, the two engineers are in accord. The company's engineer has, however, charged against the moving of the material and the con-

struction of this item, proportions of his total cost of plant and equipment which are greater than the total cost of these materials and which are greater than that charged to any other portion of the work, and are excessive under the circumstances.

Included in the present structure and now used as a protection against ice and flood conditions, are the approach fills to the old bridge, its abutments and retaining walls on the up-stream side. The company's engineer has included the retaining walls and abutments as one item at a unit cost for new construction which is only about half the cost estimated by respondent's engineer in the former case. Both wing walls and abutments were built many years ago and show evidence of having been substantially repaired or rebuilt since then. They are in effect second hand material and the unit price for them is obviously a cost made on that basis, notwithstanding the testimony to the contrary. The engineer has included both the old fills and the new fills constructed when the new bridge was built in 1924 and 1925 at the same unit costs. Although this unit cost is conceded to be unusual and higher than was estimated when the bridge was built, there is substantial evidence that it is not an improbable cost for such work in this vicinity. The lower cost adopted by the Commission's engineer for the old fill alone is based, however, upon the fact that it is an old fill adapted to its present uses and is not intended to be a cost of placing new fill. The Commission is of the opinion that if the fill is to be regarded in its entirety as used and useful property, it should be included at a price reflecting its second

hand nature, as was done in the prior proceeding.

In connection with the construction of the new bridge the company rehabilitated an existing brick house for use as an office building and superintendent's residence. Considerable cinder fill was placed around it and a stucco coat added to the brick structure. The building does not appear to differ in any way from any ordinary dwelling in the vicinity. The company's engineer estimates the cost to reconstruct it as it now is at $8,100. The Commission's engineer has valued it at $5,861, which is the sum which the company's books show as its cost to date. The company's engineer in appraising the structure does not attempt to say how the market value of this house and lot would compare with his estimated reproduction cost figure. The record contains no evidence as to its market value. In view, however, of the fact that a large part of the work estimated on is the rehabilitation of an already old structure and would not increase its market value beyond the original figure, it would seem that the reproduction cost new would materially exceed the market value.

Considerable difference of opinion exists between the engineers in regard to the proper allowances for the overhead construction costs and other intangible items. The company's senior appraisal engineer testified that his figures for promotion and organization expenses and cost of financing were based on his general experience. It does not appear that he made any special study of these costs as applied to corporations operating in this part of the country. He further admits that his experience with bridge financing has not been extensive. He also

states that all these figures as developed by him are based on an assumed condition of reproduction wherein the system of highways converging at the point of the bridge and the general development of the country in the vicinity exist as they actually do, but that the company would have to be organized and the construction financed without any previous history of a bridge at that point. The estimates of the engineer of the Commission take into consideration that a highway bridge originally built about 1830 had existed at this point for many years and that the financing of 1924 and 1925 was based in part on the successful history of the old wooden structure subsequent to its acquisition by the company. Evidence was also introduced by the company as to costs incidental to the construction of the Tacony-Palmyra bridge over the Delaware River in Philadelphia and of other bridges in other parts of the nation. It does not appear that any of these bridges replaced previously existing bridges at already generally recognized crossing points. Conditions applying to the Philadelphia bridge are particularly affected by the fact that except for local traffic the bridge is in direct competition with the other bridge over the Delaware River built at joint public expense and expected ultimately to be a free bridge. Obviously, opinion evidence based on experience gained under conditions involved in the development of such enterprises, must be clearly shown to be applicable to the fundamentally different condition faced by the Clark's Ferry Bridge Company. The Commission is of the opinion that the intangible costs of this company should be based

on the particular condition which it would have to meet and that the evidence of its witnesses does not indicate that their conclusions are so founded.

Considerable discussion appears in regard to the length of time properly allowable for the construction of the bridge. The company's engineers have assumed a period of sixteen months and the Commission's engineer one year. The shorter period is supported by the fact that the bridge was actually built in less than that time. It is true that the contractor earned a substantial bonus by doing so, but the record shows that he was desirous of making the greatest possible use of his equipment and of getting it out of the river. The Commission's engineer expressed his opinion that the use of more equipment for the shorter period was the efficient method of handling the work. In calculating the cost of interest during construction both engineers have averaged the cost of the work evenly over their respective construction period, multiplying this by the interest rate adopted. The company's engineer has used an interest rate of 8%, although there is no evidence of such a cost. The Commission's engineer has assumed that money could be had for such periods at 6%.

No claim is made by the company, either as a capital investment as a cost of financing, or as an amortized amount to be treated as an operating expense, for any discount below par at which its bonds might have to be sold to the public by reason of the fact that they would not bear interest sufficiently great to enable them to be sold at par.

The company suggests, as it did in the prior case,

that it should be allowed an additional value in the sum of $100,000 due to the fact that its bridge is alleged to be located at a point particularly suitable for the purpose. The original choice of the bridge site was not made by the entrepreneurs of this company, but by the Commonwealth and the company has merely taken advantage of traffic customs which the Commonwealth, through its system of highways and otherwise, has created. As in the previous consideration of this claim the Commission is of the opinion that such a claim of value must be rejected for rate-making purposes.

It being assumed that the existing highways and traffic would already be in existence if the bridge were to be reproduced, it is conceded that the company would not have a period after the completion of the bridge through which it would have to await the development of its business. It is suggested, however, that in addition to interest during construction a further allowance should be made equal to the difference between this amount and the fair return the company would enjoy if its bridge were completed and rendering a public service. This claim, which the company's appraisers call Attached Business Value, amounts in substance to a claim that as soon as a company begins to prepare itself to enter public service, it should be given the full fair return to which it will be entitled after it has made its full investment for this purpose and is actually serving the public. Such a claim cannot be conceded.

The company's appraisal of its property deducts from its estimate of reproduction cost new an item

of $16,282 for what is termed "Observed Deterioration" at a time when the bridge was approximately four and a half years old. Its witness states that it is based on the visible deterioration observed in his inspection of the bridge and is not based on any life theory or expiration of life of the bridge. The exact amount is determined by taking a percentage of the total value, the percentage being the opinion of the witness. It appears that this witness's inspection of the property did not cause him to see any crack in the structure of sufficient size to expose the reenforcing steel within, although the Commission's engineer did so.

The Commission's engineer's deduction for accrued depreciation as of May 30, 1931, when the bridge was six years old is $41,403. He states that the exact amount is calculated by the use of the 4% sinking fund method but that his determination that the amount named is proper is based on an examination of the bridge structure itself and of a study of its past and probable future history. His figure reflects its probable total life of forty to fifty years and all the hazards and causes of obsolescence to which it is subject as well as actual weathering and wear and tear.

In substantiation of its contention that it should be allowed in the future the sum of $21,210 for annual depreciation to retire the entire value of the structure in forty years the company produced evidence from which the conclusion is inescapable that the bridge structure has already incurred chemical changes in its composition and an oxidization of its steel parts as a result of which it can never be put

back into the condition of a new structure and has already sustained substantial deterioration the effects of which have not yet been felt. The company's witness contends that from the very moment the structure was completed it should have been allowed to set aside an allowance in the amount named and hold it free of any claim to the interest on it. At the same time it claims that the value of its property for rate-making purposes should be decreased only to the extent of the actually observable deterioration irrespective of what experts may know is the probable future of the structure and irrespective of the greater amounts which have been set aside to retire the structure at the end of its useful life. Clearly such an attitude is inconsistent and cannot be adopted.

As has already been noted the valuation of the property in 1926 was made chiefly on actual cost figures adequately supported by testimony of engineers. The present claim of increased value is based on non-competitive estimates of appraisers whose business it is to make such estimates. In the face of their figures the evidence is that construction costs and methods have not increased in the interval. Any necessity of reconciling their estimate with the actual prior figures is disclaimed by these witnesses. In the interval since the prior valuation, the Commission could not assume without investigation that capital investment and operating cost had not changed so as to affect the level of reasonable rates. We have now made such a study of the property. Having made a complete valuation of this property in 1926 and having ascertained that

cost conditions have not changed materially since that time, the Commission is of the opinion that it is not required to reopen the entire question of valuation merely because the company concerned desires it. Nor is there anything in the evidence adduced which is persuasive that in this particular case justice requires a reopening of the prior valuation. Upon a complete examination of the entire record in both proceedings, the Commission is of the opinion and finds that the fair value of the property of the Clark's Ferry Bridge Company is still $767,800 as of this time.

The allowances which the Commission will make for taxes and operating expenses are shown in the accompanying table. In general no comment need be made except that they are the amounts which the company's books substantiate. It may be noted, however, that of the $6,000 claimed for officers' salaries, each officer being a stockholder or closely connected with a stockholder, the Commission will, as in the previous decision, allow the sum of $2,400. The charge for fees to the trustee of the mortgage is wholly rejected.

Although the books do not show that any expense has been incurred for maintenance of roadway surface and other general maintenance except incidental tarring of cracks, the sum of $1,800 is allowed as in the previous case against the time when resurfacing of the roadway is necessary. The record indicates also that the company receives $300 a year rental for certain electrical conduit which is allowed to be attached to the bridge. This sum will be deducted as a credit from the expenses of operation.

No claim is made for an allowance of Federal Income Tax, but a rate of return of at least 9% is claimed in view of the alleged unusual physical and economic hazards of the property. The Commission will, however, allow a return of 7% in addition to the allowance of income tax as an operating expense.

Operating Expenses

	Allowance
Wages:	
Superintendent	$ 1,200
Clerk	900
Tollkeepers	7,200
Officers' Salaries	2,400
Snow Removal	200
Coal	350
Light	1,100
Legal Service	100
Accountants	200
Postage and Printing	200
Hose, Pipe, Telephone & Misc.	400
Maintenance of Bridge	1,800
Insurance	1,700
Federal Income Tax	3,000
Capital Stock Tax	2,200
Local Tax	50
	$23,000
Less	300
	$22,700

In conformity with the principles stated in deal-

ing with accrued depreciation and its finding of fair value, the Commission will not allow the amount claimed for annual depreciation but will continue the amount named in the previous decision, namely, $7,678.

The gross annual revenue which is therefore found reasonable is $84,125, made up as follows:

Fair Return	$53,746
Annual Expenses	22,700
Annual Depreciation	7,678
Total	$84,124

As in the previous proceeding the company contends that its present revenues have been the result of road development beneficial to it and that the future improvements will tend to take traffic from it. An elaborate traffic study was prepared based on general data on automobile population and on traffic counts made during eleven hours of March 4, 1930, checked by another count on April 10, 1930. From this it is estimated that certain road improvements will take certain types of business from the bridge. As the volume of traffic over the bridge varies materially through the year (August, 1931, showing a revenue of $16,276.50 as compared with $6,599.51 for February, 1931), it is impossible to tell by traffic counts made so close together what proportion of the total traffic for the whole year is to be ascribed to those classes which will be affected by the roads discussed. Moreover, although some improvements have recently been made to certain of the roads, notably Route 5 on the west shore between Duncannon and Lemoyne and Route 14 on

the east shore between Millersburg and Sunbury, the state is in no way committed to the improvement of these highways in their entirety and it is wholly conjectural when the improvement of these roads will be carried to such a point as to cause them to divert any substantial part of the traffic now passing over the bridge. In view of these facts and the further fact that the company may apply at any time for an increase in rates if it meets any material reduction in its revenue, the Commission is of the opinion that the present rates must be regarded as producing an annual revenue of approximately $135,000 a year.

The Commission accordingly finds that the rates of the Clark's Ferry Bridge Company as contained in its tariff P. S. C. Pa. No. 5, are unreasonable and will be for the future, and that a tariff should be filed calculated to produce a revenue of $84,125 per year. As has already been noted, the company has recently reduced its rates applicable to the comparatively small number of trucks and buses using the bridge. The Commission is therefore of the opinion that the benefit of this reduction in rates should be given wholly to the ordinary passenger automobiles and wagons using the bridge and particularly to those who use it frequently. As the exact number who will be benefited by the reduction cannot be ascertained at this time the new rates to be filed must necessarily be tentative to some extent and the company will be required to continue to file monthly reports of revenue and expenses.

The Commission cannot overlook the fact that the annual gross revenue which by its order of June

9, 1926, found proper under conditions which have continued substantially to the present time, has been materially exceeded by the revenue obtained by the company throughout the entire five and a half year period involved. Although the Commission directed that a tariff be filed calculated to produce $85,905 per year, the company has collected receipts in excess of this amount as follows: 1926 (6 mos. estimated), $10,237; 1927, $35,650; 1928, $49,895; 1929, $55,934; 1930, $44,649; 1931, $51,633; total receipts collected in excess of the amount ordered $247,998. This is an average of $45,100 per year, in excess of the allowable return. Under the decisions of the appellate courts of the state this Commission may not consider in this proceeding the propriety of these charges in the past. The matter will, however, be referred to the Attorney General for such action as the Public Service Company Law may indicate; THEREFORE,

Now, to wit, February 2, 1932, IT IS ORDERED; That Clark's Ferry Bridge Company file, post and publish, effective thirty (30) days from date hereof, upon not less than one (1) day's notice to the public and this Commission, a new tariff calculated to produce an annual gross revenue of not more than $84,125.

IT IS FURTHER ORDERED: That said tariff contain as tentative rates intended to produce said gross annual revenue of $84,125, and effective until further action by this Commission or the company in conformity with said determination of allowable gross revenue, the following charges:

(1) A rate of 8 cents cash toll for all ordi-

nary passenger automobiles and wagons now paying 10 cents.

(2) A ticket without time limit salable at the rate of two for 15 cents for all such automobiles and wagons.

(3) A 20-trip ticket non-transferable as between vehicles, good any time within thirty (30) days from date of issue and salable for one dollar ($1) for all such automobiles and wagons.

(4) Rates for all other types of vehicles as are now provided in Tariff P. S. C. Pa. No. 5.

IT IS FURTHER ORDERED: That said company file with this Commission monthly statements of income and operating expenses, showing the number of vehicles passing over its bridge in each class of traffic as contained in its tariff.

THE PUBLIC SERVICE COMMISSION
OF THE
COMMONWEALTH OF PENNSYLVANIA

(Seal)

(Signed) S. RAY SHELBY,
Acting Chairman.

Attest: LOUIS TEVELL, *Secretary.*

Commissioner Woodruff reserved the right to file a concurring opinion, elaborating on one or two issues that he considered of special importance.

II.

ANSWER OF THE PUBLIC SERVICE COMMISSION OF THE COMMONWEALTH OF PENNSYLVANIA TO PETITION IN APPEAL.

(Filed March 4, 1932)

To the Honorable, the President Judge and Judges of the Superior Court of Pennsylvania:

And, now to-wit, March 3, 1932, comes The Public Service Commission of the Commonwealth of Pennsylvania by its counsel and in answer to the petition in appeal in this case respectfully represents:

That on or about January 14, 1930, the Commission having had before it a complaint proceeding involving the rates of the Clark's Ferry Bridge Company, a corporation operating a toll bridge across the Susquehanna River at Clark's Ferry, Dauphin County, and the appellant herein, in which proceeding the record indicated that said rates were probably excessive to some undetermined extent, instituted an inquiry on its own motion into the reasonableness of said company's rates.

The proceeding was docketed to the Commission's Complaint Docket No. 8219 and was duly proceeded with before the Commission. Five hearings were had thereon and respondent company was heard in written and oral argument. During the pendency of said proceeding, to-wit, on November 14, 1930, the company made effective certain changes in its rate

structure, which reduced rates applying to certain minor classes of vehicles.

That on or about February 2, 1932, the Commission made and entered its final order in said proceeding, wherein it found that the then effective rates of the Clark's Ferry Bridge Company, the present appellant, were unjust and unreasonable, and directed that said company file with the Commission a new tariff calculated to produce a specified gross revenue and containing, inter alia, certain specific rates therein set forth. The present appeal was taken from said report and order.

The copies of the Commission's order of January 14, 1930, instituting the investigation, the answer of Appellant thereto, and the report and order of the Commission of February 2, 1932, are true and correct copies of the originals which are now being certified to your Honorable Court.

That in answer to the specific assignments of error contained in said petition in appeal, the Commission further represents:

(1) That said report and order dated January 14, 1930, is just, reasonable, in accordance with the weight of the evidence and in conformity with law.

(2) That the Public Service Company Law of July 13, 1926, P. L. 1374, and the amendments and supplements thereto, vest the Public Service Commission with full power, authority and jurisdiction to make said report and order.

(3) That each and every of the specific assignments of error, designated "1st" to "22nd", inclusive, is severally and specifically denied, and on the contrary it is averred that the findings, determina-

tions, conclusions and orders therein specifically set forth were just and reasonable, in accordance with the weight of the evidence and in conformity with law.

Wherefore, The Public Service Commission of the Commonwealth of Pennsylvania prays your Honorable Court that the petition in appeal be dismissed at the cost of the appellant.

And, it will ever pray, etc.

THE PUBLIC SERVICE COMMISSION
OF THE
COMMONWEALTH OF PENNSYLVANIA

(Signed) E. Everett Mather, Jr.,
Assistant Counsel.
John Fox Weiss,
Counsel.

III.

TESTIMONY BEFORE THE COMMISSION

First Hearing

Stenographic report of hearing held in the North Office Building of the State Capitol in Harrisburg on Wednesday, March 12, 1930, at 9:30 A. M.

Commissioner Brown, Presiding

Appearances:

E. Everett Mather, Esq.,
For the Complainant.

Snyder, Miller & Hull,
By George Ross Hull, Esq.,
For the Respondent.

COMMISSIONER BROWN:

Are you ready?

MR. MATHER:

If the Commissioner please, I would like to suggest that the report of the Commission in the prior rate case of the Clark's Ferry Bridge Company—that was Complaint Docket No. 6611—the Commission's report of June, 1926, be noted as a part of the record in this case, and also the annual reports of the company for 1926, '27 and '28, filed in the spring of the following years.

COMMISSIONER BROWN:

Any objection to that?

MR. HULL:

Upon the assurance of counsel for the Commission that the respondent may offer and have admitted into the record in this case such portions of the previous record as may be material in this case, we have no objection to the offer.

COMMISSIONER BROWN:

We will admit the offer, and you may make offer of the parts of the testimony that you want admitted, and that will be admitted.

MR. HULL:

Well, I understand the Commission will agree to the admission of such portions of the record in the previous case as we shall offer.

MR. MATHER:

I am perfectly willing to agree to that, if Mr. Hull also agrees that we can rebut by such other portions as we want.

MR. HULL:

Oh, yes. The only part of the other record that I don't want in here was a lot of speculation and argument by the complainants' witnesses in that case that helps nobody at all and simply means expense if we ever have to print this record.

COMMISSIONER BROWN:

All right, we understand it.

JAMES E. KEANE, called on behalf of the complainant, being duly sworn, was examined and testified as follows on

Direct Examination

MR. MATHER:

Q. Now, Mr. Keane, give the reporter your full

name and your position with the Commission for the record.

A. James E. Keane, accountant.

Q. Now, Mr. Keane, you made an examination of the books and records of the Clark's Ferry Bridge Company, from the point of view of what that will show in regard to the company's capital investment and property values and operating expenses and revenues, and so forth, for rate making purposes?

A. I did. During the month of February, I spent five days in the office of Main and Company and five days in the office of the Clark's Ferry Bridge Company.

Q. You are speaking of February, 1930?

A. Yes.

Q. And what did you find in the office of Main and Company? Are the Clark's Ferry Bridge Company's books there?

A. I found the general books in the office of Main and Company; that is, the journal, ledger and cash book.

Q. And that's the Harrisburg office of Main and Company?

A. Yes, sir.

Q. And have you prepared a report of what you found from those books?

A. I have.

(Volume entitled "Report of Bureau of Accounts and Statistics of the Public Service Commission of the Commonwealth of Pennsylvania on its Examination of the Books, Accounts and Records of Clark's Ferry Bridge Company" produced and marked "Complainant's Exhibit No. 1, 3-12-30, L. T.")

Q. I show you a report which has been marked Complainant's Exhibit No. 1 of this date, and ask you to turn to page 10 thereof. That's the facsimile of your signature, is it?

A. It is.

Q. And is this the report that you prepared of what you found in those books?

A. It is.

Q. Now, will you turn to Exhibit XVI, to your table showing the analysis of officers' salaries for the years 1924 to 1929, the first and third lines in there, particularly the third? Will you please explain that line? I note that you have for three years two persons listed as president. Will you just give us the detail of that?

A. Mr. William Jennings was president from 1924 to 1926, inclusive. At that time Mr. C. W. Lynch became the president of the company, and is still the president.

Q. During the time that Mr. Jennings was president, what was Mr. Lynch's position?

A. Vice president.

Q. Mr. Keane, does this change in the titles effect a change in the salaries paid in any way?

A. No, sir.

MR. HULL:

Q. And there is no allegation that there was a duplication of salaries?

A. No, sir.

MR. MATHER:

Q. Now, Mr. Keane, will you turn to your table showing the insurance paid? I don't recall the—

A. You will find that in the page 9 in the text of the report.

Q. Will you just explain to us what insurance the first item covers?

A. That covers fire, flood, lightning, use and occupancy up to and including the year 1928. In 1929, I understand that the fire insurance has been dropped.

Q. But use and occupancy is included for all four years?

A. Yes, sir.

Q. What is this item in the red in 1929 in that table?

A. That's the net figure for workmen's compensation. In 1929 the company paid $13.55 as an estimated premium for workmen's compensation. In that year the company received a refund of $23.20 on compensation of prior years, making a net figure of $9.65.

MR. MATHER:

If the Commissioner please, I will offer the report in evidence.

COMMISSIONER BROWN:

Any objection, Mr. Hull?

MR. HULL:

Just a moment.

Cross Examination

MR. HULL:

Q. Mr. Keane, in the preparation of this report, were you assisted by others?

A. Yes, sir.

Q. Who else assisted you in the preparation of the report?

A. William M. Peifer.

Q. And what is his position?

A. He is an accountant.

Q. An accountant, in the Bureau of Accounts of the Commission?

A. Yes, sir.

Q. Anyone else?

A. No, sir.

Q. You two gentlemen are entirely responsible for the gathering of the data, its analysis and arrangement in the preparation of this report; is that correct?

A. Yes, sir.

Q. Now, may I ask for the purposes of the record your qualifications? How old are you?

A. I am 34 years old.

Q. You are a graduate of what institution?

A. The Wharton Extension School of the University of Pennsylvania.

Q. Well, prior to that, what was your preliminary education?

A. Well, the ordinary grammar school.

Q. Where?

A. In Harrisburg; the parochial school.

Q. And after you left the—well, did your education in the parochial school extend into the high school?

A. No, I went from there to the School of Commerce Business College.

Q. You went from the grammar school to the Harrisburg School of Commerce?

A. It wasn't called Harrisburg; it was just called the School of Commerce.

Q. Well, it's a school in the city of Harrisburg?

A. Not now.

Q. It was?

A. It was; yes, sir.

Q. A school specializing in commercial subjects?
A. Yes, sir.
Q. Bookkeeping, typewriting, accountancy, stenography, and so on?
A. Yes, sir.
Q. How long were you at the School of Commerce?
A. Two years.
Q. Following that, where did you go to school?
A. That ended my school career at that time.
Q. And you attended the Wharton Extension School—Wharton Business School?
A. Yes, sir.
Q. Which is maintained here, at Harrisburg, in the evenings?
A. Yes, sir.
Q. That is, you didn't, during the period that you were attending the School of Commerce?
A. No, sir.
Q. Did that come after that?
A. That came after.
Q. After you left the School of Commerce, where were you employed?
A. The Public Service Commission.
Q. In what capacity?
A. As stenographer and clerk.
Q. In what bureau?
A. The Bureau of Accounts and Statistics.
Q. And how long were you employed there in that capacity?
A. Well, three or four years.
Q. And was it during that period that you attended the Wharton School?
A. Yes, sir.

Q. The Wharton School is an extension school, maintained by the University of Pennsylvania, is it not?

A. Yes, sir.

Q. And it gives certain night courses here?

A. Yes, sir.

Q. What courses did you take at that school?

A. I took accountancy, real estate, corporation finance, law.

Q. Those four?

A. Yes, sir.

Q. You are not a certified public accountant, are you?

A. No, sir.

Q. How many years did you attend the Wharton School?

A. Four years.

Q. And how many evenings a week?

A. Four nights.

Q. Four nights?

A. Yes, sir.

Q. And you took up one of these subjects each night; is that the way the courses were arranged?

A. Yes, sir.

Q. One night you went and took accountancy and another night, corporation finance?

A. Yes, sir.

Q. And another night, the other courses?

A. Yes, sir.

Q. And what period of instruction did you receive each evening?

A. From 7:30 until 9:30, two hours.

Q. And did you, at the conclusion of these courses, take any examination?

A. Yes, sir.

Q. Did you receive any diploma or certificate of efficiency?

A. I did.

Q. You did not, however, receive any degree?

A. No, sir.

Q. Prior to your entry into the Wharton School, was it necessary for you to take any examination to qualify yourself as a student?

A. I had to qualify, but did not have to take any examination.

Q. Your qualification was simply the record of your previous grammar school education; is that correct?

A. Yes, sir.

Q. Now, when was it that you finished your course with the Wharton School?

A. Nineteen, nineteen, I believe it was.

Q. And since that time you have been continuously engaged as an accountant in the Public Service Commission?

A. Yes, sir.

Q. During this period have you been called upon to make any other studies like this?

A. Yes, sir.

Q. You spoke of a table of insurance that appears at page 9. Did you examine the several insurance policies held by the company?

A. No, sir. The insurance policies were in the hands of the trustee.

Q. The trustee is whom?

A. Commonwealth Trust Company.

Q. In the City of Harrisburg?

A. Yes, sir.

Q. You did not ask them to submit to you for examination the insurance policies?

A. No, sir.

MR. MATHER:

Q. That's the trustee on the mortgage bonds you're referring to?

A. Yes.

MR. HULL:

The trustee under the mortgage, yes.

MR. HULL:

Q. Mr. Keane, just what, if anything, did Mr. Morgal have to do with this report?

A. Well, after I prepared the report, Mr. Morgal censored it.

Q. That is, he read over what you had prepared and determined that, in his opinion, it was gotten up in the proper shape to show what you desired to show? He did not check any details, did he?

A. No, sir.

MR. HULL:

That's all. We have no objection to the admission of the report.

COMMISSIONER BROWN:

Let it be admitted.

Redirect Examination

MR. MATHER:

Q. Mr. Keane, you are a graduate of the Wharton Evening School that has been referred to?

A. Yes, sir.

Q. And you have whatever certificate or degree they grant, have you?

A. Yes, sir.

Q. And your admission to that school was based on what?

A. On my previous schooling and my experience with the Commission.

Q. And that previous schooling, prior to your taking the business course here in Harrisburg, was what?

A. The grammar school, ordinary course in grammar school, and the two-year course in business college.

Q. The parochial school that you referred to—is that what you are now referring to as the grammar school?

A. Yes, sir.

MR. MATHER:

That's all, sir.

MR. HULL:

Are you going to call Mr. Peifer?

MR. MATHER:

No.

Recross Examination

MR. HULL:

Q. In doing this work, Mr. Keane, examining the accounts and preparing this report, did you and Mr. Peifer have equal authority, or was he working under you?

A. He was working under me.

Q. Will you tell us just what part of the work he did?

A. He made the computations shown on Exhibits IX to XV, inclusive. That is, he applied the tariff charge to the tariff unit and arrived at the amount shown under "Revenue."

Q. Now, did you furnish Mr. Peifer the informa-

tion to make those schedules, or did he, himself, get it from the records of the company?

A. I furnished him the information.

Q. You were the person who got it from the company's records?

A. Yes, sir.

Q. And did you subsequently check those tables to ascertain their accuracy?

A. I didn't go—I didn't check the minute details; that is, the—

Q. Did you use the spot check method?

A. I did.

Q. And do you know in a general way what Mr. Peifer's qualifications are?

A. No, sir; I do not.

MR. HULL:

That is all.

MR. MATHER:

Q. His work was done under your checking, however?

A. Absolutely.

MR. MATHER:

That is all the Commission has at the present time, sir.

MR. HULL:

Well, may I inquire, is that the Commission's case?

MR. MATHER:

For the present time.

MR. HULL:

Well, I don't know what that means. If this is the Commission's case in chief, that's all right.

MR. MATHER:

That's the Commission's case in chief; yes, sir.

MR. HULL:

Then for the present the Commission rests.

MR. MATHER:

That is correct.

MR. HULL:

If the Commission please, in the presentation of the complainant's case in chief, we have been presented with an elaborate exhibit, containing a great many detailed schedules, with innumerable figures. It is obviously impossible for us intelligently to cross examine the witness with respect to anything in this report concerning which we may desire further information. If we proceeded with his cross examination at this time, I think we would waste time. We should like to inquire whether or not Mr. Keane will be available for cross examination after we have had an opportunity to examine this report carefully?

MR. MATHER:

There is no objection on my part, sir. Mr. Keane is always here.

COMMISSIONER BROWN:

Well, will Mr. Keane be available?

MR. MATHER:

He will be.

JAMES W. WHITE, called on behalf of the respondent, being duly sworn, was examined and testified as follows on

Direct Examination

MR. HULL:

Q. What is your full name?

A. James W. White.

Q. Where do you reside, Mr. White?

A. Dressor, Illinois, with business headquarters in Milwaukee, Wisconsin.

Q. What is your occupation or business?

A. An appraiser.

Q. You are employed by whom?

A. The American Appraisal Company, of Milwaukee, Wisconsin.

Q. How long have you been employed by them?

A. Eleven years.

Q. What position do you now hold with that company?

A. I am the manager of the public utility division of that organization.

Q. Do you hold a degree from any institution of learning?

A. I have a B. S. Degree from Valparaiso University, of Valparaiso, Indiana.

Q. Mr. White, will you detail in your own way your engineering experience?

A. I have had about twenty-five years engineering experience on construction and valuation, divided about as follows: from 1905 to 1908, I was on power plant construction with the Union Electric Light and Power Company, of St. Louis; from 1908 to 1909, I was in the Sewer Department of the City of St. Louis; from 1909 to 1913—

Q. While there, were you engaged in construction work?

A. Construction, designing and surveys for sewer work. From 1909 to 1913, I was with the St. Louis Public Service Commission, Municipal Commission, regulating the rates of utilities in the city of St. Louis; 1913 to 1918, I was with James E. Allison and Company, consulting engineers, of St. Louis,

making appraisals of utility properties, and from 1918 to the present day I have been with The American Appraisal Company, of Milwaukee, appraising utilities and industrial properties.

Q. Now, will you outline briefly in your own way what experience you have had in construction work?

A. During my construction and engineering experience with the Union Electric Light and Power Company, I was employed as an assistant engineer on the construction of a 116,000 kilowatt power plant, located on the bank of the Mississippi River, which involved the construction of heavy foundation walls, with water interference, which was done—which was constructed by means of coffer dams and caissons. During this experience, I had contact with the building of concrete walls, masonry walls, steel erection and some bridge construction in connection with the railroad facilities serving this plant, which included the construction of piers, railroad piers, and bridges, my experience also including assisting in the preliminary surveys, taking the flow of the Mississippi River at Keokuk, Iowa, in the preliminary investigation for the Keokuk power project.

During my connection with the Sewer Department in the city of St. Louis, the work consisted of surveys for sewers, estimates of the construction for sewers and general installation of sewer construction.

Q. Now, what experience have you had in the making of appraisals?

A. During my connection with the St. Louis Public Service Commission, I had charge of the appraisal of structures specifically and also charge of the office, the completing of appraisal reports as

prepared for the Commission and their application to questions of rate regulation. During my connection with the Public Service Commission, I worked on the appraisals of the United Railways of St. Louis, the Southwestern Telegraph and Telephone Company of Missouri in St. Louis and East St. Louis, the Union Electric Light and Power Company of St. Louis and the St. Louis Water Works. These properties had a total value of something in the neighborhood of $100,000,000.00, as appraised. During this period, I also had charge of a traffic survey or, rather, two traffic surveys made of the traffic conditions in the city of St. Louis. During my connection with the appraisal of the United Railways, we had numerous bridges to appraise connected with the street railway system. The appraisal of the St. Louis Water Works involved questions of intakes from the Mississippi River and other water questions, contact with water difficulties.

During my connection with James E. Allison and Company, I had charge of making appraisals and preparing reports for presentation to Commissions and Courts. The character of the properties appraised were electric light, gas, water, telephone and railroads. In this connection, I made an estimate of the cost of the east approach for the Municipal Bridge in St. Louis, in conjunction with others. This was a pre-construction estimate. During the time I was with James E. Allison and Company, I appeared in court on cases and also made a traffic survey of the city of New Orleans for the—traffic survey of the street railway in the city of New Orleans for the city of New Orleans. I had charge of this work.

During my connection with The American Appraisal Company, I have devoted the greater part of my time to utility appraisals. I have prepared reports that have been presented in a number of cases, and have appeared in some of those cases myself, and prepared them for others to present. I have actually had considerable to do with the development of the methods now followed by The American Appraisal Company in appraisal of utility properties. Some of the more important appraisals that may be mentioned on which I worked were the Niagara Falls Power Company, the Niagara Junction Railway Company, the Rochester Telephone Corporation, Montpelier and Barre Light and Power Company, Lakeland Gas Company, The Arizona Power Company, St. Paul Union Stock Yards, Light, Power and Gas Department of the city of Colorado Springs, the Los Angeles Municipal Harbor, work on the Pullman Company appraisal, and many others of less importance.

Q. Now, Mr. White, in the course of your appraisal work, have you had occasion to appraise bridges, bridge structures?

A. Yes, sir; I have appraised several bridges during that time. There have been bridges in connection with most of the railroads that I have appraised. I appraised a bridge across the Mississippi River at St. Paul, I appraised a bridge across the Miami River in Ohio, and other, smaller structures.

Q. Now, Mr. White, in the making of an appraisal, does The American Appraisal Company have any fixed standards of practice which it applies?

A. The American Appraisal Company follows,

more or less, the general practice followed by engineers and other appraisers. The work is usually done under the supervision of a field superintendent, who collects the information in the field, with such assistants as are necessary in the way of specially trained assistants. This work is brought in and usually checked over by the head of the department, and the period of construction, the reasonable allowances of overhead and intangibles are generally developed by the field appraiser and the superintendent of the department. This work is later reviewed by some official of the company, and it becomes the finished appraisal of The American Appraisal Company.

Q. Did you direct the making of an appraisal of the properties of the Clark's Ferry Bridge Company?

A. Yes, sir; I did.

Q. Will you just describe in a general way what was done in the making of that appraisal?

A. Well, I was instructed by the officials of our company to take charge of making an appraisal of the Clark's Ferry Bridge Company, and I went to Harrisburg on September 7, 1929, reviewed the records and drawings of this bridge, as found in the office of Mr. Masters, consulting engineer there; secured such information as I could from him, and was joined by two assistant appraisers, Mr. Johnson being designated as the superintendent of the work, and on the eighth we went to Clark's Ferry, the Clark's Ferry Bridge, went over it very carefully, and on the ninth I made a further check of the information available in Harrisburg, and left Mr. Johnson to complete the work. Mr. Johnson, after

spending several days in addition to the time I spent, returned to Milwaukee, and we then worked out the unit prices and, in conjunction with myself, we finished up the details of the report, and this is the report we prepared.

(Bound volume, entitled "Clark's Ferry Bridge, Duncannon, Pennsylvania," produced and marked "Respondent's Exhibit No. 1, 3-12-30, L. T.")

Q. Mr. White, I show you a bound volume marked Respondent's Exhibit No. 1, and ask you to examine that and state whether or not that is a copy of the appraisal that you have referred to?

A. This is a blueprint copy of the appraisal that I referred to, made by myself and Mr. Johnson.

Q. And you also have a copy of that before you?

A. I have; yes, sir.

Q. Now, Mr. White, will you take this appraisal and, going over it from beginning to the end, explain in a general way what this appraisal is intended to embrace?

A. Page 1 and 2 of this appraisal sets forth the general principles on which the appraisal was made. This appraisal, as shown in this sumary and letter, covers the cost of reproduction of the property of the Clark's Ferry Bridge Company. At page 2 we have shown the property divided into two classes, intangible and tangible, the tangible property then being divided into the direct construction costs and the indirect construction costs, followed by the cost of reproduction less depreciation. This information comes forward from a summary table on page 4, which shows the various items going into the intangible costs, being promotion and preliminary ex-

penditures, organization and incorporation, financing, and interest on the intangible expenditures, followed by the tangible costs, the direct construction costs, bridge head lands, clearing right-of-way, bridge structure and the bridge office, all of which are supported in later pages of this report more in detail. The indirect construction costs are given as engineering and supervision, administrative, legal and incidentals, and interest during construction. The total direct construction costs are given as $718,504.30, the intangible costs $82,320.00 and the indirect construction costs $91,102.00, or a total of $891,926.30, being the estimate of the cost of reproduction of this bridge, with its necessary expenditures in organization and promoting the enterprise and financing or securing the money with which to build it. From this has been deducted $16,282.00, as being the observed depreciation or an allowance for any defects that could be detected in this bridge, leaving a reproduction cost less depreciation of $875,644.30.

This is followed by a descriptive report of the bridge and of the highways that converge to cross at this bridge, and other discussion of that nature.

At page 12, we have analyzed all the various items or discussion of the items that entered into the intangible costs. For example, we have "Promotion and Preliminary". The assumption made in reproducing this bridge would be that the roads probably converge to this point, that the development of the country is practically the same as now found, but there would be no bridge existing there. We figured then the cost of promoting the enterprise, organizing the company and building the

bridge as if constructed in September, 1929, for the reproduction of that bridge under the existing conditions of that time. Under "Promotion and Preliminary", we have included the salary of some executive competent to carry on an enterprise of this character through to conclusion, with such legal fees and engineering fees as would probably be expended before he could reach a point where he could interest others to associate with him.

The "Organization and Incorporation," of course, would be the salaries of such executives, again devoted to the perfecting of the organization, the necessary fees paid to lawyers or engineers and the necessary filing fees and other fees in getting the rights from the State or the Federal Government to build this bridge. It is assumed that the first period of promotion would cover about a year. In other words, there would be discussion of this bridge perhaps, and that in advance of any actual organization being perfected. After that, it would probably take about six months to perfect the organization before the actual money would be available and the engineering of the enterprise started. We have computed about a six months engineering period, followed by a construction period of 16 months. From our experience and general knowledge of construction, it is our belief that 16 months would be a reasonable period under which this bridge could be constructed, and this is supported by the fact that the contractor for this bridge mentioned a 16-month period as the period of construction.

Q. Right at that point, Mr. White, the bridge was actually constructed in somewhat less than 16 months, was it not?

A. The bridge had a bonus clause, I think, in the contract, and the contractor worked nights and overtime to construct this bridge. As I understand, they constructed it in less than that time, but our unit prices are on the basis of normal construction, and under normal construction we would consider 16 months as a reasonable time for the construction of this bridge.

Q. Mr. White, let me direct your attention to the item of clearing the right-of-way and removal of the old bridge piers. Just what does that cover?

A. The history of the situation at the time this bridge construction began was that there was the remains of an old bridge at this site. The War Department, as I understand it, required that the piers be removed from this old bridge. There were also some buildings adjacent to the approach to this bridge that were removed and moved to a new location, and the item you just mentioned would include the removing of these obstructions.

Q. The bridge head lands, of course, includes the real estate owned by the company on either side of the river?

A. On either side of the river; that is correct.

Q. The bridge office lot—what is that?

A. The bridge office lot is a lot across the road, across the highway from the bridge, I believe, where the office is located.

Q. Now, how did you arrive at the item of $16,282.00 which you deducted for depreciation?

A. The inspection of the bridge reflected that there was very little visible deterioration in the bridge; there were a few cracks in the vicinity of the toll house, but, in the main, the bridge was in

very good physical condition, and the $16,000.00 we deducted there is the amount we considered would be a reasonable amount to discount the bridge because of existing deterioration in the bridge.

Q. It was based, then, upon an actual observation?

A. Actual observation of the condition of the bridge at the time of appraisal.

Q. And not based upon the expiration of its assumed life?

A. It is not based on any life theory or expiration of life of the bridge.

I didn't review the indirect construction costs, which are summarized on page 33.

Q. Excuse me. I interrupted you. You go ahead.

A. I did review rather completely the intangible costs, with the exception of the cost of financing. On the assumption that this bridge was going to be reproduced in its entirety new, without a history, it would take quite an amount of effort to finance or secure the money for building this bridge—

Q. Mr. White, right there, is your conclusion in that respect based upon the theory that it always takes time and effort to gather the money, or have you knowledge of some specific bridge enterprises that have had difficulty in raising money?

A. Well, I have knowledge of other enterprises more specifically than bridges. I have known of some bridge enterprises, too, but my personal contact with their financing isn't very extensive.

Q. I see.

A. But I have had experience quite extensive with water power developments, where years have

passed from the initial period until the money was finally secured, a great amount of engineering work was necessary and a great amount of effort on the part of the promoters to attract capital to the enterprise. It happens that our company at times are called on in some of these preliminary enterprises and paid substantial fees for making investigations and making reports, when, as and if completed, for financing purposes.

The engineering has been computed at six and one half percent on the physical plant, as shown on page 33. That is our opinion and our experience with the cost of engineering on enterprises of this character.

All the administrative, legal and incidental expenditures are included on the same page as $9,930.00, which would include a portion of the salaries of the executives during the construction period, the legal questions that might be necessary to be passed on in reference to construction, and not in any way duplicating with the financing or the promoting of the enterprise, and incidental expenditures that would be necessary.

Interest during construction has been figured on the basis of a 16 months construction period for half the time at 8%, or about 5% has been computed as interest during construction.

Q. Now, these items that you have referred to total $891,926.30?

A. Yes, sir.

Q. You may state whether or not, in your opinion as an engineer, that is the fair reproduction cost new of the Clark's Ferry Bridge at prices obtaining September 1, 1929?

A. That is my opinion.

Q. And deducting the depreciation actually observed, what, in your opinion, is the cost of reproduction new less depreciation, based upon the prices prevailing September 1, 1929?

A. $875,644.30.

Q. Now, Mr. White, in addition to those elements of value entering into the reproduction cost new less depreciation, have you in connection with your study of this bridge property and its business found other elements of value, not included in this appraisal?

A. Yes, sir; I think there exist other elements of value in this bridge, other than the cost of reproduction. While it may not so be termed the reproduction cost, it isn't really actual cost, but more the sacrifice that would be made by an owner if the bridge were to be reproduced. I would illustrate that in this way, that if someone were going to start to build a bridge, having already had the preliminary and financing completed, it would require 16 months for this bridge to be completed. During that 16 months, if the money invested in that bridge should draw 8%, it would give something between $95,000.00 and $110,000.00 return, based upon whether it would be placed on the cost of reproduction as hereinbefore stated or on the total cost of reproduction. If from this we deduct the $38,000.00 which has already been allowed as interest during construction, that would leave in the neighborhood of fifty-seven to seventy-two thousand dollars, which I believe would be the advantage of having this bridge ready for operation today, rather than building the bridge. In other words, if this bridge wer

destroyed today and would require 16 months to rebuild, the owner of this bridge would lose the return during that 16 months, which less the interest during construction which has already been allowed on the physical valuation would leave this figure of about $72,000.00, as the advantage of the existing bridge over a bridge to be constructed. This allowance here stated would be very similar to the value ordinarily termed as "Going Concern Value," except there's no assumption that the business would have to be attached after the completion of the construction.

Q. By that, I understand, Mr. White, you mean that after this bridge is once built and thrown open to traffic you are not assuming any period from that time on in which this company would have to develop its business?

A. That is correct.

Q. You are assuming that the moment the bridge is completed, under existing circumstances, the traffic that is now flowing over it will immediately begin to flow over it?

A. That is correct.

Q. And your allowance here represents the loss in earnings during the period of construction?

A. That is correct.

Q. Over and above the interest during construction that has already been allowed in your estimate of reproduction cost new?

A. That is correct.

Q. And this element of value which you now speak of is referred to at page 20 of your report as "Attached Business Value"?

A. That is correct.

Q. Now, what other element of value, if any, has your study developed in connection with this bridge?

A. An investigation of the conditions, part of which is from other engineering reports that we have studied and partly from the published reports of the Government, indicates that this point is shorter than any other point along the river in this immediate vicinity, that there is better foundation at this point, and that to construct a bridge at any other point except this would entail an expenditure in excess of the expenditure on the construction of this bridge of somewhere between one hundred and fifty to two hundred thousand dollars. So we believe that this bridge site has an advantage over other bridge sites, and has a value that a carrier, if looking for a site to cross this river, would be willing to actually pay money for, in preference to other sites in this vicinity, and we have estimated that at $100,000.00.

These are not costs of reproduction, but they are other elements of value that we believe should be recognized in fixing the value of the Clark's Ferry Bridge.

Q. Mr. White, inasmuch as that element was referred to in the previous case, I wonder whether you would not mind stating for the record just what instruction, if any, you received with respect to that item before you started your study?

A. Well, that item was mentioned to me by two or three individuals, and I was told to use my own judgment as to whether that should be included or whether it should be excluded.

Q. And does your inclusion of it here represent your independent judgment, not influenced by any-

thing that has been told you by parties or attorneys in the case?

A. It does, and on other bridges that The American Appraisal Company has appraised the same factor has been recognized.

MR. HULL:

That is all. You may cross-examine.

Cross Examination

MR. MATHER:

Q. Mr. White, you have mentioned a number of appraisals with which you have been connected as an employe of The American Appraisal Company. In what capacity were you connected with them?

A. Well, in various capacities. Sometimes I did all the field work myself, at other times I took the field work and worked in conjunction with the field superintendent in completing the overheads and intangibles, working up the unit prices, and it would be variable as to what my contacts are.

Q. Did I understand you to say that in your office procedure the man in the office in charge is the one who works up the unit prices?

A. No, sir.

Q. What is the system you follow?

A. The field superintendent, who goes out and collects the data in the field, is usually the man that has the unit prices worked up under his supervision or practically works up the unit prices.

Q. Then what is the position of the man in the office in regard to the appraisal?

A. The man in the office directs the principles on which the appraisal is to be made, checks the unit prices as developed, as to whether they are considered comparable with other unit prices for similar

work, and completes the writing of the appraisal a great many times.

Q. Now, I think, in regard to bridges in particular, you mentioned having been connected with two, one a railroad bridge in St. Paul, the other one over the Miami River in Ohio?

A. They are the large bridges that I have been connected with; a great many smaller ones.

Q. Now, this bridge in St. Paul, for instance; for what purpose was that appraisal made?

A. It was made for carrier purposes and introducing to the Interstate Commerce Commission. I appeared before the Commission and presented the value placed upon this bridge.

Q. What do you mean by carrier purposes.

A. A carrier is the railroad purpose.

Q. For railroad purposes?

A. For railroad purposes.

Q. What railroad purposes?

A. It was a railroad bridge.

Q. Well, for what railroad purpose was the appraisal made?

A. For fixing the value of the railroad under the general order of the Interstate Commerce Commission and for recapture purposes under the order of the Interstate Commerce Commission.

Q. And what was your connection with that appraisal?

A. I made the entire appraisal, with one assistant. I was the field man in charge of that appraisal, and appeared before the Commission at every subsequent hearing in connection with that appraisal.

Q. And your work on that appraisal was done under the supervision and guidance of a superior

in The American Appraisal Company's office?

A. In connection with a superior in The American Appraisal Company's office, but the burden of that entire appraisal rested with me.

Q. But you worked under his guidance?

A. Generally. It was signed by an executive of the company.

Q. You mean your appraisal was signed by an executive of the company?

A. As representing the company, also signed by me.

Q. And the same thing holds true with the other large bridge, in Ohio?

A. The other bridge, in Ohio, was done under my direct supervision, with one assistant, measuring, taking the details. The unit prices, and so forth, were accumulated by myself.

Q. What kind of a bridge was that?

A. It was a steel bridge.

Q. Used for what purpose?

A. Street railway.

Q. Street railway only, or highway also?

A. No, it wasn't a highway bridge.

Q. Now, last September, Mr. White, I understand you were in Harrisburg one day in the office studying plans and general background and then the second day you went up to Clark's Ferry and looked over the bridge yourself, with Mr. Johnson?

A. That is correct.

Q. And then you went back to Milwaukee?

A. And investigated records, as well, further the third day; then went back to Milwaukee.

Q. Then you were in Harrisburg two days, or parts of two days, and in Clark's Ferry on one day?

A. That is correct.

Q. And all the unit prices and the study of the ground and of the highways and everything else in connection with the bridge was done by Mr. Johnson and his assistant?

A. The detailed study; yes, sir. The general study I made of it; that is, generally, but not in detail.

Q. And Mr. Johnson, I take it, in accordance with your customary procedure, determined the unit prices?

A. Yes, sir; the unit prices were determined by Mr. Johnson and his assistant.

Q. And that has been, in accordance with your general practice in your office, based on appraisals all over the country?

A. That is correct, and the information he collected at this particular office for this particular property.

MR. MATHER:

I think that's all I have as to Mr. White's qualifications. I have no objection to the report going in evidence. I think it was offered, was it not?

MR. HULL:

I don't think I did formally offer it.

MR. MATHER:

But as far as cross examination on the merits of the report, I think I will have to ask the same privilege that Mr. Hull did, so that we can analyze what is in here and then examine the gentleman later. I would like to have him available for a further hearing.

MR. HULL:

That will be entirely agreeable to us.

MR. MATHER:
Then that's all.

Redirect Examination

MR. HULL:
Q. Mr. White, I neglected to have you make reference to the three maps at the back of the appraisal. Will you just tell what they are?
A. Well, the first map, on page 34, shows the location of the bridge at Clark's Ferry and the highways converging to that locality or in the vicinity of that. The second map is a plan and elevation of the type of bridge that was constructed, which has been reproduced from records furnished by the consulting engineer in charge. The third map is a photostat copy of the topographic map of the Geological Survey, and shows the relative distances of a number of the shorter points along the river.
MR. HULL:
That is all, Mr. White. We now offer in evidence Respondent's Exhibit No. 1.
MR. MATHER:
No objection.
COMMISSIONER BROWN:
It will be admitted.

PAUL B. JOHNSON, called on behalf of the respondent, being duly sworn, was examined and testified as follows on

Direct Examination

MR. HULL:
Q. What is your full name, Mr. Johnson?

A. Paul B. Johnson.
Q. Where do you live?
A. Milwaukee, Wisconsin.
Q. And what is your occupation?
A. Appraisal engineer.
Q. How old are you?
A. Forty-four.
Q. By whom are you now employed?
A. By The American Appraisal Company.
Q. How long have you been in their employ?
A. Eight years.
Q. What has been your scientific training?
A. I am a graduate of the University of Wisconsin, with the degree of Bachelor of Science in civil engineering.

Q. Now, will you in your own way outline what experience you have had in construction and valuation work?

A. I have had 23 years of construction and valuation work, about as follows: From 1907 to 1915, I was assistant engineer in the Erecting Department of the American Bridge Company. From 1915 to 1916; I was on the valuation staff of the Chicago Traction and Subway Commission. From 1916 to 1918, I was principal engineer in the employ of the Illinois Appraisal Company, of Chicago, Illinois. From 1918 to 1919, I was a captain in the quartermasters' corps of the United States Army, assigned to duty as constructing quartermaster in charge of large projects. From 1919 to 1922, I returned to the employ of the Illinois Appraisal Company. From 1922 to date, I have been in the engineering division of The American Appraisal Company.

Q. Now, in these various capacities, will you tell

us what was the nature of your work?

A. While employed by the American Bridge Company, I was located in the field on the construction of bridges, buildings and many other types of structures, working in various capacities from timekeeper to having full charge of the work. This work involved the compilation and preparation of cost data on current work, as well as making estimates for future work, and handling the various engineering problems that came up in connection with our construction. During the war I was engaged in emergency construction work of various kinds for the construction division of the army, located in this country. For 13 years I have been making investigations and appraisals of industrial, commercial, natural resource and public utility properties, such as street and elevated railways, power plants, including a toll bridge across the Missouri River.

Q. What kind of a bridge was that, Mr. Johnson?

A. That was a highway bridge.

Q. A highway bridge. What type of construction?

A. It was a steel bridge with concrete floor and concrete approaches. The main spans were steel.

Q. Well, what were the piers?

A. Concrete piers.

Q. Have you become acquainted in the course of this experience with the hazards and contingencies that are connected with the construction and the maintenance of bridges?

A. I have.

Q. What particular bridges have you been con-

cerned in the construction of?

A. The highway and railroad bridge across the Mississippi at St. Louis, a railroad bridge across the Mississippi at St. Paul, a railroad and highway bridge across the St. Louis River at New Duluth, Minnesota; a highway bridge at Hibbing, Minnesota; a highway and railroad bridge across the Missouri River at Kansas City, a railroad bridge at Indiana Harbor, Indiana; a bridge across the Bitter Root River near Missouli, Montana; a bridge across the Ranier River at Fort Francis, Ontario.

Q. Now, Mr. Johnson, can you tell us which of those have been concrete pier bridges?

A. They have all rested on concrete piers, with concrete approaches on some of them.

Q. Mr. Johnson, will you just tell us what methods were followed by you and your associate in preparing your appraisal?

A. We arrived here on September 7th, and proceeded to get a full set of drawings and specifications and other data from the office of Mr. Masters, the engineer, and then proceeded to the bridge, and by observation and measurement of the various parts of the bridge determined that the drawings actually applied to that bridge and that the bridge had been built according to the drawings. We made an inspection and check of all the quantities and elements of physical property entering into the bridge, checking against the final estimate of the quantities in the bridge furnished us by Mr. Masters. After the completion of the field investigation, we took our notes back to Milwaukee with us and worked up the detailed prices and prepared the report in its final form.

Q. How long were you engaged here in your work, Mr. Johnson?

A. I was here from the 7th to the 12th, inclusive, of September.

Q. Of 1929?

A. Yes, sir.

Q. Do you have with you a copy of Respondent's Exhibit No. 1, being the appraisal of this property?

A. I have.

Q. I want to call your attention to the tangible costs in this appraisal; first, the item of bridge head lands. Will you tell us what that includes and what data and information you procured in order to arrive at the valuation of that item?

A. That item represents my opinion of the fair value of the lands owned by the company at each end of the bridge for bridge purposes—it represents the value of the land as land, and no particular attention being paid to the use for the land as bridge land.

MR. MATHER:

Now, let me ask, is the first half of that answer stricken out, or is it to stand?

THE WITNESS:

That "for bridge purposes" referred to the use of the land and not the value of the land.

Q. Mr. Johnson, I call your attention to page 35 of the appraisal, and ask you to state what land, as indicated on that plan, is included in this item of bridge head lands?

A. There is a long, narrow strip at the south end of the bridge, or at this end of the bridge, containing approximately three acres, I think—

Q. Is it the strip included within the broken line

and the shaded line?

A. Yes, sir.

Q. It is all the land within those lines?

A. Yes, sir.

Q. And on the other side of it, the north end of the bridge?

A. It would be the land within the broken line and the shaded line.

Q. The shaded line indicates the new property, purchased at the time this new bridge was built, the broken line indicating what the company owned prior to that time?

A. Yes, sir.

Q. Now, what information did you get respecting the value of this land on which you based your appraisal? How did you get the data on that?

A. I consulted local land owners, got all the information I could on the sales, asking prices and opinions of local men acquainted with conditions at that place.

Q. And your conclusion here is based upon information thus obtained?

A. Yes, sir.

Q. What data did you gather to form the basis of your estimate of clearing the right-of-way?

A. That was taken from the records of the company furnished us and is the actual cost of that work, shown by the records.

Q. That element in the appraisal, then, is not an estimate; that is an actual cost?

A. That was cost; yes, sir.

Q. Now, the bridge structure itself—upon what data is your appraisal of that item based?

A. We obtained from local dealers and contrac-

tors the prevailing rates for prices of material and labor, and made an investigation of conditions under which the bridge would be built today or at that time, and estimated the cost of doing the work.

Q. Some question was suggested here in the cross examination of Mr. White as to whether your unit prices were based on information here or information out in Milwaukee. I want that to be clear.

A. They are based on information obtained here, but subsequently checked by other information that we had in Milwaukee.

Q. You used local labor conditions, local quotations on labor and the kinds of materials necessary for the construction of this bridge?

A. We did.

Q. And your checking in Milwaukee was just for the purpose of determining whether your findings here were out of line generally with prices elsewhere; is that correct?

A. Yes, sir.

Q. Now, I want to call your attention, Mr. Johnson, to page 31 of your appraisal, the last two items of your bridge structure cost, totaling $39,900.00. Will you explain what those two items consist of?

A. The first item is 8,000 cubic yards of earth fill. The second item is 2,200 cubic yards of stone retaining wall. These two items are what is left of the old bridge which we consider as useful in the new bridge. They serve a very definite function of protecting the approaches and abutments of the new bridge, being located upstream a short distance from the present bridge.

Q. And they now are a part of the whole operating and used bridge structure?

A. They are a part of the bridge structure.

Q. Did you take part, Mr. Johnson, in determining the observed accrued depreciation?

A. Just in a general way.

Q. Did you consult and collaborate with Mr. White on that item?

A. We discussed the question, I believe.

MR. HULL:

You may cross examine.

Cross Examination

MR. MATHER:

Q. You just mentioned this observed accrued depreciation, in the determination of which you participated in a general way. Who did the rest of it; Mr. White?

A. Mr. White.

Q. As to these various bridges with which you have been familiar, the most recent of them was constructed when?

A. You mean, with which I had anything to do in the construction?

Q. No, with which you have been connected with the construction or maintenance?

A. 1914, I believe.

Q. And that bridge was where, and what kind of a bridge was it?

A. That bridge was the highway and railroad bridge across the Mississippi at St. Louis.

MR. MATHER:

That is all I have for the present, Mr. Commissioner. If I may, I would like to cross examine Mr. Johnson later on the general merits of the appraisal, insofar as he had anything to do with it.

MR. HULL:

Well, that is all right.

Redirect Examination

MR. HULL:

Q. Mr. Johnson, have you since 1914 been engaged in any appraisal of bridge properties?

A. I have appraised one bridge since then.

Q. When?

A. About 1923 or '24.

Q. And where was that?

A. That was at St. Charles, Missouri.

Q. And what kind of a bridge was that?

A. That was a highway bridge.

Q. Of what type of construction?

A. Steel, the main spans were on concrete piers, and with concrete approaches.

Recross Examination

MR. MATHER:

Q. When was that bridge built?

A. That particular bridge was built about ninety something, I think.

MR. MATHER:

That's all I have.

MR. HULL:

That is all, Mr. Johnson.

MR. MATHER:

I take it, it's clear on the record that the Commission will want to cross examine both Mr. Johnson and Mr. White as to their unit prices and quantities, and so forth, in their estimates?

COMMISSIONER BROWN:

Well, I understood you to say that you wanted

to cross examine them after you had a chance to examine this appraisal.

MR. HULL:

We will have them available.

Now, Mr. Commissioner, if agreeable to the Commission, that will be all of the respondent's case at this time. We had intended at this hearing to present the results of a study designed to determine the amount of annual depreciation and maintenance which should be allowed. That was in charge of Mr. Nathan Jacobs, who assured me that he would be here at this hearing. He did so on the assumption that in a case in the State of Connecticut where he was under subpoena he would not be required more than a week, but he has been there for three weeks and isn't away yet, and we are not prepared to go ahead. We also have undertaken a traffic study, which we think would be very material. The gentlemen in charge of that study have completed it and presented to us last night a report. That report is exceedingly valuable, but the period of time allowed for the developement of that report has been brief and not sufficient to allow us to make a check count, which ought to be made and which we propose to make. If we were to go ahead now and put that report in, it would probably result in withdrawing some tables and substituting others, and mussing up the record, and if we make this check count and make any alterations necessary in the report before it is offered in evidence for the record, I think it will be better.

COMMISSIONER BROWN:

Well, I think we have to have another hearing.

We might just as well do it that way. Is that all for this morning, Mr. Hull?

MR. HULL:

That is all we have, yes.

MR. MATHER:

That's all I have to offer today.

SECOND HEARING

Stenographic report of hearing held in the North Office Building of the State Capitol in Harrisburg on Thursday, April 10, 1930, at 9:30 A. M.

COMMISSIONER BROWN, PRESIDING

(Same appearances as at first hearing)

JAMES E. KEANE, recalled, was examined and testified as follows on further

Cross Examination

MR. MATHER:

Before Mr. Keane starts in, Mr. Commissioner, there's one error in typing in Exhibit III of the accounting report. On line 43 there's a reference to a new sofa. That should be "safe". Otherwise in the entire exhibit the word is correct.

COMMISSIONER BROWN:

I suppose there's no objection to correcting that, Mr. Hull?

MR. HULL:

No, indeed.

Q. Mr. Keane, do you have before you a copy of Complainant's Exhibit No. 1?

A. Yes, sir.

Q. Will you turn to page 4, please?

A. Yes, sir.

Q. First I direct your attention to the items at the bottom of page 3. If I understand your report correctly, you found from an examination of the books of the company and the record in the preceding case that these items enumerated at the bottom of page 3 were items that were originally charged to maintenance and later by the accountants restored to capital; is that correct?

A. That is correct.

Q. Then at the top of page 4 you make the statement that "with the exception of the item of $819.35 for incorporation expense, all of the foregoing items were disallowed in the Commission's finding of fair value of June 8, 1926." In what sense and for what reason do you mean they were disallowed?

MR. MATHER:

Mr. Hull, I think it would probably clarify the answer if you split your question into two. I think you asked him for what reason and in what sense. As an accountant, he is hardly called on to explain the Commission's reason for doing it.

MR. HULL:

I think the Commission's reason appeared from his report.

MR. MATHER:

Well, that's in evidence.

MR. HULL:

I know, but I want to give this witness, in all fairness, an opportunity to explain what seems to me to be a misleading statement.

A. Well, if you will refer to my Exhibit II, item

3, the amount is shown in the year, 1925. Now, the only amounts shown in this account which the Commission carried over as value to the new bridge was the item of incorporation expense of $819.35 included in that item and the total of the items in the year 1925, amounting to $52,101.20.

Q. Yes. Now, is it not the fact that the Commission did not pass at all upon the question as to whether these items at the bottom of page 3 were proper capital charges or maintenance charges, but the position the Commission took was that the company was not entitled to any of the value of the old structure, excepting the $52,000.00, and gave the company credit for that in its valuation and disallowed this, but without any regard to whether these were proper capital or maintenance charges? Isn't that the fact?

A. That is the fact.

Q. So that, in making the statement that you make at the top of page 4, you did not mean to infer that these charges were not proper capital charges, did you?

A. No, I did not mean to infer that they were not proper capital charges.

Q. You simply mean that they, along with a number of other capital charges, were disallowed because the Commission would not allow any of the value of the old structure to be carried over into the new, excepting the $52,000.00?

A. Yes, sir.

Q. That's right?

A. Yes, sir.

Q. On page 1 of your report you state that the company in 1929 refunded an issue of $450,000.00 of

first mortgage 6% gold bonds, maturing June 1, 1939, at a price of one hundred three and a half and accrued interest. Do you have the exact amount in dollars of the premium paid for the retirement of those bonds?

A. I don't believe I have.

Q. Can you obtain that figure from your work sheets? I don't mean now, but I mean, do you have the data in your work sheets from which you could subsequently supply that figure?

A. I believe I could.

Q. Will you make a note of it, then, and do so?

A. Yes.

MR. MATHER:

Are you referring to actual cash paid, Mr. Hull?

MR. HULL:

Yes.

Q. And will you at the same time ascertain the amount of premium received by the company in cash on the sale of its new bonds?

A. Yes.

Q. Now, will you turn to page 7 of your report. I direct your attention to the second sentence on that page, and ask you whether you intended to say that "while the company's records did show the basis used," or whether you intended to say, "While the company's records did not show the basis used"?

A. Did not.

Q. The word "not" should be inserted there?

A. Yes.

Q. Now, Mr. Keane, did you examine the income tax reports of the company, made to the Federal Government?

A. No, sir.

Q. Did you ask for their production and exhibition to you?

A. I asked for them, but I did not examine them in detail.

Q. You did not?

A. No, sir.

Q. Then you do not know as a fact that they set forth in detail the method of computing depreciation used by the company?

A. No, sir. I do show the method as I—

Q. No, your statement is that the books and records of the company do not show the method, but that you assumed the method was as follows. Now, the fact is that, while it may not appear on the face of the journal or whatever book of original entry they have, it does clearly appear among the records that were exhibited to you for your examination?

A. I did not notice the basis.

Q. Well, you did not notice it because you did not look particularly for it?

A. Well, I had no particular reason to examine the income tax returns in detail. I just checked the amount of tax which the company showed as payable with the records of the company.

Q. You knew, however, that in income tax reports depreciation is always or usually computed and claimed as a deduction from gross income, did you not?

A. Yes, sir.

Q. And not having found, as you say, a record of their method of computing depreciation before, didn't it occur to you to look there?

A. No, sir.

Q. Then you are not prepared to say now that the books and records of the company do not show how their depreciation was computed?

A. I was referring to the general books there in my statement, general text.

Q. So that, that is what you mean there by the "company's records"?

A. Yes, sir.

MR. HULL:

That is all, Mr. Keane.

Redirect Examination

MR. MATHER:

Q. Mr. Keane, this $52,000.00 item that Mr. Hull refers to as having been allowed by the Commission was actually allowed by the Commission in a lesser amount only, was it not?

A. Yes, sir.

Q. Something about $49,000.00?

A. That is correct.

Q. Now, in regard to the depreciation as found in the income tax reports to the Federal Government, I believe the statement you made to which Mr. Hull refers says that the records of the company do not show the method. Is that what you intended to say?

A. The general records of the company.

Q. Do you, as an accountant, regard the income tax reports to the Government as part of the records of the company?

A. Well, it really is a part of the records of the company, but not the general records.

Q. Are the depreciation methods used in computing income tax necessarily the same as those

used on the company's own books in setting aside a depreciation reserve?

A. Not necessarily.

Q. Usually?

A. That I could not say.

Q. Are they ordinarily the same as those used in rate case proceedings?

A. I do not believe so.

Q. Then, in looking for the company's method of determining depreciation for rate purposes, you would not ordinarily go to their income tax reports to find that out?

A. No, sir.

Q. Do you know whether or not the totals as shown by their income tax reports are the same as what they have actually been setting aside?

A. I did not check that figure.

Q. In this refunding of bonds in 1929, did they refund those bonds by cash or simply pay off old bonds with new bonds?

A. I believe that was thoroughly covered in the report, the answer to your question, on page 6.

Q. And what does that show?

A. That the new bonds were pledged as collateral with the Commonwealth Trust Company, of Harrisburg, and the funds borrowed thereon were used to retire old bonds at one hundred three and a half and accrued interest, and from time to time the new bonds thus pledged were to be released and sold at one hundred two and a half and accrued interest, and the proceeds used in liquidation of the company's obligation to the Commonwealth Trust Company.

Q. Mr. Keane, in your Exhibit II, I call your

attention to Item 7, materials sold and credited to property, Item 4 above, which should have been credited to income. Is that statement of what should have been done a statement of opinion by you, or is it a statement that was found by you in the company's records?

A. It was a statement found by me on the company's records.

Q. Do you know what the item is? $245.50 is the amount.

A. $225.00 represents the sale of an old house and the balance is lumber and miscellaneous.

Q. Well, was that house the house that was taken down in order to clear the right-of-way for the new bridge?

A. I did not ascertain that fact.

Q. But this conclusion here that it should have been charged to income is not yours at all?

A. No, sir.

Q. Did you make any corrections in your statements here that you found from the books, or are they as you found them on the books?

A. They are as I found them on the books.

Q. Have you drawn any conclusions at all through these exhibits?

A. No, sir.

MR. MATHER:

That's all.

Recross Examination

MR. HULL:

Q. Mr. Keane, you have set forth in Exhibit XVII an analysis of the account of "General Charges" for the years 1924 to 1929. Is that a

complete analysis of all the expenditures of the company?

A. Yes, sir.

Q. I don't find anything there for officers' salaries.

A. Well, that's just a complete analysis of the account, "General Charges."

Q. Now, that is what I want to get at. This is an analysis of one account, which they carry on their books under the head of "General Charges," isn't it?

A. That is correct.

Q. And there are other expenses?

A. Yes, sir.

Q. That are not included in this?

A. Yes, sir.

Q. And you have not included in your report anywhere a complete statement of the expenditures of the company?

A. Operating expenses?

Q. Yes.

A. Yes, sir.

Q. Well—

MR. MATHER:

Q. Operating expenses or expenditures altogether?

A. Operating expenses.

MR. HULL:

Q. Well, where do you have operating expenses in here?

A. It's Exhibit VII.

Q. Yes. Now, you have covered officers' salaries in a separate schedule, have you not?

A. Yes, sir.

Q. And you have covered general charges in a separate schedule?

A. Yes, sir.

Q. I believe insurance you covered in a schedule in the forepart of your report?

A. Yes, sir.

Q. And taxes in another schedule?

A. Yes, sir.

Q. And did you analyze depreciation anywhere?

A. Yes, sir; there's an exhibit for that.

Q. Which exhibit is that?

A. Exhibit IV. That is an analysis of the reserve for depreciation account, but it will give the detail for the depreciation charges.

Q. That's right. Have you analyzed the labor account anywhere?

A. Yes, sir. That is on page 8.

Q. Of the—

A. Of the report, text.

MR. HULL:

That's all.

MR. MATHER:

That's all.

MR. HULL:

Do you want to examine either Mr. White or Mr. Johnson?

MR. MATHER:

I think I will take Mr. Johnson.

PAUL B. JOHNSON, recalled, was examined and testified as follows on further

Cross Examination

MR. MATHER:

Q. Mr. Johnson, I think you testified at the last

hearing that when you went on the property to examine it you got the unit quantities and data from the engineer who built the bridge, Mr. Masters, and then checked that data with what you actually found there; is that correct?

A. Yes, sir.

Q. I want to call your attention to Items 7 and 8 on page 29 of your appraisal. You have quantities there in all those items. As I understand it, you obtained those quantities, first of all, from Mr. Masters' final estimate?

A. Yes.

(Statement entitled "Clark's Ferry Bridge Company, Frank M. Masters, Consulting Engineer, Calder, Harrisburg, Pa., July 3, 1925, Estimate of Work Done by The Vang Construction Company Under Contract With Clark's Ferry Bridge Company on Construction of New Concrete Bridge, Final Estimate," produced and marked "Complainant's Exhibit No. 2, 4-10-30, L. T.")

Q. Mr. Johnson, I show you a sheet which has been made up, a copy of Mr. Masters' final estimate, marked Complainant's Exhibit No. 2. Items 7 and 8 on there, I call your attention to the cubic yardage and to a note below of a change in the amount of 782 cubic yards. Will you check that with your figures and tell me whether or not in making your own changes you did not transpose those figures and deduct 728 yards instead of 782?

A. The information furnished us by Mr. Masters' office has an item showing extra for changing class "B" to class "A" concrete in abutments, 728 cubic yards, at 55 cents.

Q. Mr. Masters' papers to you show 728 and not 782?

A. 728, yes.

Q. Now, Mr. Johnson, in checking the final estimate of quantities and qualities of concrete against the actual bridge, had you any way of telling whether or not the yardage given for each class of concrete actually was the same as in the structure, or would it be possible for class "B" concrete, say, to extend further up in the pier, into the arch, than the final estimate showed?

A. It might be possible.

Q. You really had no way of telling?

A. Not from ordinary observation of the completed structure.

Q. Mr. Johnson, you obtained these figures from Mr. Masters' final estimate, initially?

A. The quantities?

Q. The quantities, yes.

A. After a complete check from measurements and computations of the bridge itself and drawings, we found that the figures in Mr. Masters' final estimate were approximately correct, according to our check, and we, therefore, used his figures.

Q. Do you have his final estimate in such form as you could offer it in evidence?

A. We were furnished a blueprint copy of his final estimate, which is in our working papers.

Q. Will you give us, in regard to this changed item in concrete, the amount for the south abutment and the amount for the north abutment?

A. In that changed item?

Q. Yes.

A. It is not specified on that final estimate, class "B" concrete.

Q. Are you working now from Mr. Masters' figures or your own?

A. I am working from our own here.

Q. Well, I am asking you what Mr. Masters' figures showed.

A. In checking up that change, I believe we were advised by one of their engineers where that change occurred, and our own notes would indicate an allowance for it.

Q. Very well. In regard to the item on page 27 for removal of the old piers, you allow $4,478.63. I believe you testified that that was an actual cost, as shown by the books?

A. Those items on that page were taken from their capital account, their ledger account, I believe.

Q. By whom?

A. By me.

Q. Did you find also in going over those capital accounts a credit item of $1,000.00 for the sale of the salvage of the old bridge?

A. I have no record of such an item.

Q. Do you know from your study of what was done whether or not they obtained any revenue from the salvage of the superstructure of the old bridge?

A. I believe they did. I have an item received from the sale of the old bridge.

Q. What is that item in amount?

A. I have a note here of $636.00.

Q. Where was that obtained?

A. That must have been obtained from that same ledger account.

Q. Did you find any item for a cost of advertis-

ing to obtain bidders for that material that was sold?

A. I do not recall such an item.

Q. Is it your opinion that the item as found on the books would be what it would cost to do that work now?

A. I made no investigation of that.

Q. I see. Would you say that a net cost of getting rid of the entire old bridge of about $3,400.00 would be reasonable?

A. I could not say without investigating.

Q. Very well. Now, will you tell us what items go into the item immediately above this on the same page, for which you have a total of $4,069.00 and some odd cents?

A. That was an item shown on their ledger account as the cost of moving houses on the north approach.

Q. All right, and how much for each?

A. I have it in one item of $4,069.28.

Q. One item? You can't break that down at all?

A. No, I have no further breakdown of that.

Q. Do you know whether or not in arriving at that total you gave credit for an item of $225.00 for the salvage value of one of those houses that was torn down and removed?

A. I assume that that was the net amount received, or the net cost.

Q. Then in submitting these amounts as having been found on the books by you, you do not know whether they are the gross amount or the net? You simply assumed net; is that correct?

A. I took the two figures as shown by their books.

Q. As you found them?

A. As I found them, yes.

Q. I take it that you are by training an engineer and not an accountant?

A. I am not an accountant.

Q. I take it also that you had no knowledge of the fact that Mr. Masters in the prior case inserted those items, made claim for those items, the item for clearing the right-of-way at least, in the amount of $3,470.00?

A. I do not recall those figures, no.

Q. By the way, one of those houses referred to is the Steward House. On what land was that placed?

A. I believe that was moved across the road.

Q. Onto land that the company already owned?

A. No.

Q. Or did they buy it, or what land was that?

A. I understood they bought a lot for that house.

Q. And do they have title to that land now?

A. I believe not.

Q. Have you included the purchase price of that land in the cost of moving the house?

A. I have not.

Q. You say you have not?

A. I have not.

Q. Have you included that land in the price of land—in the total of land that you have in your appraisal?

A. No.

Q. In regard to the superintendent's house, appraised by you on page 32 at $8,100.00, will you explain for the record how you arrived at that total? First of all, Mr. Johnson, does that include the price of the lot on which it is placed?

A. No, it does not.

Q. Proceed.

A. That represents the estimated cost to rebuild that house as it stands today. It was already a rebuilt or rehabilitated house, I believe, being brick, with a cement, stucco finish.

Q. When was that rehabilitation?

A. I don't recall.

Q. When was the house originally built?

A. I have no record of when it was originally built.

Q. Was that an entire brick house originally?

A. I believe it was.

Q. Well, how did you arrive at your $8,100.00 total?

A. We estimated the cost to reproduce the house.

Q. Well, can you give us your detailed statement, how much for foundations, how much for walls, how much for other major points, quantities and prices?

A. No, I do not have all of the details here.

Q. Do you have any of them?

A. I have the general plan of the house.

Q. Are you aware of the fact that it actually cost, as shown by the books, $5,861.03?

A. I don't remember that item.

Q. Are you mindful of any other item of cost, as shown by the books?

A. I did not make any special analysis of their costs, no.

Q. Do you know on what basis you depreciated this house?

A. It was depreciated about 10%.

Q. About 10%?

A. It was found to be in very good condition, considering its age or its probable age.

Q. You don't know what the contract cost was to rehabilitate it?

A. No.

Q. Do you know what its condition was which caused the placing of stucco on top of brick?

A. No.

Q. Mr. Johnson, in your various engineering work, have you ever built houses?

A. I have been connected with the building of houses; yes, sir.

Q. You have not included this house in your realty, have you, in any way?

A. No.

Q. In appraising the land values, ground, as I understand it, you have obtained general opinion in the vicinity?

A. Yes, sir.

Q. You did not do that for this house at all, did you?

A. No.

Q. Then you are not at all prepared to say that this house and lot would be worth on the market the sum of $9,100.00?

A. It might on the market sell for either more or less that amount.

Q. And as to that you are making no comment?

A. No.

Q. Now, on page 31, you have your analysis for parts of the old bridge still in use in the new bridge, 2,200 cubic yards of stone wall. Will you tell us just where that wall is?

A. That wall lies immediately above the pres-

ent approaches of the new bridge on either bank.

Q. Well, you have an abutment on each end, don't you?

A. Yes.

Q. Wing walls on each end?

A. They are abutments and wing walls which were part of the old bridge.

Q. You have included both abutments and both wing walls; is that correct?

A. One wing wall on each abutment.

Q. Now, your unit cost of $10.50 a cubic yard, is that a unit cost for new work or as a second-hand job?

A. That is the unit cost for new work.

Q. Do you know about when these walls were built?

A. No.

Q. These abutments have been rehabilitated at one time or other, have they not?

A. Why, they appeared to be in good condition.

Q. Will you answer my question?

A. I don't know. I judge that they must have been.

Q. Do you mean to say, as an engineer, you can't look at that north abutment and see the line on it where it has been rebuilt at one time or other?

A. There has been some concrete put in there, yes.

Q. No, I am talking about stone wall.

A. Judging from its present condition, I would say that it probably has been rehabilitated.

Q. Have you depreciated these walls and abutments at the same rate you depreciated the new bridge, 1924 or '25 construction?

A. That was all depreciated in one item.

Q. That is, the entire bridge, including this?

A. The entire bridge, including that.

Q. Your 8,000 cubic yards of earth fill, you have a unit cost of $2.10. Where did you get the quantity?

A. We measured up the fills and estimated the quantity from actual measurement.

Q. Will you give us your component parts of those fills as you measured them up?

A. I find one item here on the south approach, but that is not complete, 100 feet by 50 feet by 10 feet.

Q. What you have actually done is accept the total that Mr. Masters had in the prior figures, did you not?

A. As I recall it, my assistant measured up those approaches, and we figured them independently.

Q. Were you aware, in arriving at the figure you used, that Mr. Masters had appraised these fills at $12,000.00, or on your quantities at a unit cost of $1.50 a cubic yard?

A. I don't recall that we had that information.

Q. Wouldn't $1.50 a cubic yard be an adequate price to lay those fills?

A. We priced those old fills on the same basis that we priced the fill for the new bridge.

Q. Wouldn't $1.50 be all right for that?

A. Considering the distance from which they either had to haul or ship in fill, I think not.

Q. How much was there altogether? It was about 18,000 cubic yards, was it not?

A. In the bridge?

Q. In the approach fills, yes.

A. It was quite an item.

Q. It's items 1 and 2, is it not?

A. That would be item 2, 10,616 yards.

Q. Plus 8,000 in the old?

A. Yes, sir.

Q. Would be a total of 18,000, odd?

A. Yes, sir.

Q. Now, you have assumed that that—in figuring a reproduction cost estimate, you have assumed that that would all be laid at the same time, did you not?

A. On a reproduction cost theory, yes.

Q. Now, will you tell us how you arrived at your figure of $2.10 per cubic yard?

A. The material delivered by rail was estimated at a dollar a cubic yard, based on a quoted price that we obtained from the Bethlehem Mines Corporation. We figured labor and overhead and plant charges of 68 cents, and adding to that contingencies and profit made a total of $2.10.

Q. Now, on your dollar a cubic yard for the material delivered, does that assume it will be shipped up from Cornwall?

A. From Steelton, I believe.

Q. And how did you come to estimate that that would cost you a dollar a cubic yard?

A. That is based on 35 cents at Steelton and 70 cents freight, or a total of $1.05 a ton, which we considered equivalent to about a dollar a yard.

Q. Would that be the only place that fill would be available?

A. We looked over the district down through there and decided that, while it might be available within a mile or so haul, it could be obtained this way just as cheap.

Q. Did you consider the possibility of dredging it out of the river in the immediate vicinity of the bridge?

A. No.

Q. Did you consider the possibilities of obtaining it on the west or north bank, in the immediate vicinity of the bridge?

A. There would be very little available in the immediate vicinity of the bridge.

Q. How much did you estimate it would cost you to procure the fill, if you obtained it in the vicinity of the bridge?

A. We estimated about a mile haul by truck, and handling, loading and unloading, to be practically the same as this figure we have used.

Q. That $2.10 is rather an unusual item for the cost of placing fill in large quantities, is it not?

A. Not when you have to ship your material in and handle it. A good part of that was handled across the river.

Q. I don't understand your answer.

A. That fill that was actually used was shipped in by rail for the north approach and was transferred across the river.

Q. $2.10 is still a rather unusual amount for fill, in general, is it not?

A. It is.

Q. Now, Mr. Johnson, in arriving at unit prices throughout your bridge structure, I take it you had before you the bid sheet when the existing bridge was constructed in 1925, did you not, or 1924?

A. We had those unit prices; yes, sir.

Q. Did you also have a similar sheet for the state highway bridge up the river at Northumber-

land?

A. No.

Q. How about the highway bridge up above Williamsport, a place called Hyner?

A. No.

Q. Did you have any figures on the bridge now being constructed down the river from Columbia to Wrightsville?

A. Yes, sir.

Q. What other local data did you have on which you based your figures?

A. Our figures were not based on the unit prices shown in those other bridge jobs. They were based on market prices of material here, at the current labor rates and the estimated cost of putting it in place.

Q. Now, suppose, in the item of reinforcing steel, which you have on page 30, you explain why you used the cost of six and three-eighth cents a pound, as against the item of four cents in the Columbia-Wrightsville Bridge?

A. We used a base price on reinforcing steel of $39.00 per ton f. o. b. Pittsburgh, to which was added a freight rate of $6.20, making a delivered price at Clark's Ferry of $45.20 per ton. Our unloading, handling, cutting, bending, placing and wiring is estimated at $26.70, with plant, transportation and plant distribution of $28.76, to which was added overhead, hazards, contingencies and profit.

Q. Overhead?

A. Contractor's overhead.

Q. How much did you allow for each of these intangibles?

A. Contractor's overhead and hazards, 15% of

the direct material and labor cost.

Q. What are the rest of them?

A. And 10% profit.

Q. Now, in the quantities you would use in this, wouldn't the steel mill place them and bend them and shape them for you without extra cost?

A. No.

Q. Is that your business experience?

A. Your mill price is for straight bars, stock lengths or random lengths. They are not fabricated by the mill.

Q. That is your business experience?

A. Yes, sir.

Q. Why assume a purchase in Pittsburgh?

A. The nearest mill, source of supply.

Q. Do you know where the steel was actually purchased that went into the bridge?

A. No, I do not.

Q. Do you know where the steel was actually purchased that's going into the Columbia-Wrightsville Bridge?

A. No.

Q. Would you be surprised that it's being purchased in Columbia?

A. The price, whatever the source, is based on the Pittsburgh base, plus freight rate.

Q. Do you know or do you not know that the unit price for the steel delivered on the job in Columbia, on that bridge, is 2.8 cents a pound?

A. No.

Q. Do you know of any reason why the steel could not be obtained for this bridge in Steelton or Harrisburg?

A. It might be.

Q. As a matter of fact, the steel in this bridge is almost entirely straight pieces, is it not; almost no bending?

A. No, there is considerable bending.

Q. Well, whether it's considerable or not, as reinforcing steel goes, it's rather little, is it not?

A. I wouldn't say so.

Q. Do you know what the unit bid was when this bridge was constructed?

A. You mean, under the original contract?

Q. Yes.

A. I have it here—four and three-quarter cents.

Q. You don't know where that was obtained, I think you said?

A. You mean, where the steel was obtained?

Q. Yes.

A. No, I do not.

Q. And in the Columbia-Wrightsville Bridge, I believe you said you had the figures? The price is four cents per pound?

A. I believe it was.

Q. Now, Mr. Johnson, turn to page 29 of your exhibit. In item 8 you list a quantity of 1:2:4 concrete, at $16.20 a cubic yard, and then in item 10 you list a quantity of the same type of concrete, at $28.15. Will you explain the difference in those unit prices?

A. The difference largely occurs in the amount of labor and material in the formwork and the placing of the forms and the placing of the concrete. The concrete material itself is the same.

Q. Well, now, will you explain to us just what that extra labor and formwork in the arches consists of?

A. The first item is for piers and abutments—

Q. That's the item 8?

A. Item 8.

Q. Yes.

A. Where there's nothing unusual about the formwork. The forms consist of straight walls, braced—

Q. Now, in that $16.20, how much did you allow for formwork and labor?

A. In the $16.20?

Q. Yes.

A. Formwork and form labor was a dollar and a half a yard.

Q. That's formwork and labor in placing forms?

A. Yes, the forms themselves.

Q. That's a dollar and a half a cubic yard, you say?

A. Yes, sir.

Q. Right.

A. And the forms in item 10 were $8.04.

Q. What are the other items you have in there?

A. Well, item 8 is made up in this way: Material, $7.69; labor, plant, transportation, handling, $5.20—

Q. Now, that labor is the labor to pour it, and so forth; to mix it?

A. That's to mix it and to pour it and to transport it across the river—to which is added 15 per cent. overhead, contractor's overhead, hazards and contingencies; to which is added ten per cent. profit.

Q. Contractor's profit?

A. Yes.

MR. HULL:

Q. What is the amount of the overhead in dol-

lars?

A. $1.93.

Q. And the profit?

A. $1.48. It was arbitrarily reduced to $16.20.

MR. MATHER:

Q. Now, your corresponding items in item 10. You have already given us $8.04 for building forms?

A. Now, corresponding to the other figures the material is $12.85, including form material.

Q. Including form material?

A. Yes.

Q. Is that not included in the $8.04?

A. That is included in the corresponding figure of the other item.

Q. I don't follow you?

A. That is included in this $7.69 of labor, plant transportation and handling $9.41, total $22.26, contractor's overheads, hazards.

Q. What is that $22.26?

A. That is total labor, material and plant charges; then the contractor's overhead and contingencies $3.34, profit $2.56.

Q. Does that make up the total?

A. Making the total $28.15.

Q. Now, by way of explanation, you say your $12.85 for material in your item 10 includes material to build the forms?

A. That includes form material.

Q. And your $8.04 there includes just what?

A. I gave you this: $12.85 corresponds with the $7.69 on the other item.

Q. Now, if that includes material used to build the forms, what does the $8.04 cover for item 10?

A. That includes form material and labor both.

Q. Well, is there not a duplication then in your form material?

A. No.

Q. You say you have it in both items?

A. The $8.04 is for forms only in the one case and $1.50 in the other case.

Q. Is for forms only?

A. Yes.

Q. Does it include material used in the forms?

A. Yes.

Q. You have just said that the $7.69 for item 8 and the $12.85 for item 10 also included material to go into forms?

A. But in that setup that I gave you the $7.69 did not include that $8.04.

Q. Well, I understood that?

A. It is merely a reclassification of the labor and material.

Q. Let us check it over this way, Mr. Johnson, and we will deal with item 10 later. You have given me these figures for material and labor in the construction of forms $8.04; for material in the construction of forms, and in the concrete mixture $12.85; for the labor of placing, transporting the mixture, etc. $9.41, and then your contingencies. Now, I ask you in those two items is there not a duplication of the cost of material going into those forms?

A. No, sir.

Q. Now, which item is it in, or is it partly in both?

A. It is partly in both.

Q. Then your segregation does not contain, or does not divide that item so that we can determine

where it actually is or should be?

A. You asked me originally where some of that difference came between those two unit prices.

Q. That is right?

A. And I explained it by showing the difference between the cost of the forms in one case and the cost of the forms in the other case. Now, that cost included both labor and material form cost.

Q. Now, the figures that I read to you will add up to more than $28.15?

A. As I say in taking the total cost, 8 is broken down between labor and material and is included in these other figures.

Q. I wish you would break up that $28.15 into its component parts without any attempt to group them in different ways. The three figures you gave me as they stand right now total about $30, without including your hazards?

A. Well, the $8.04 should not be in that group of figures as such.

Q. Then give me what part it should be?

A. The material includes $6.81 for concrete and $6.04 for forms, making a total for material only of $12.85.

Q. Now, your labor in building forms is what?

A. Labor in building forms is $2.00; the labor, handling, mixing, transportation of material include all plant charges and would be $7.41, that makes a total of $9.41, gives a total, material and labor of $22.26.

Q. Now coming back to item 8. What is your item for the material in the concrete? Is that the same as item 10?

A. It would be $6.81.

Q. Then as to the cost of your concrete these two items are the same?

A. Are the same, yes.

Q. Now how about your material going into the forms, how much for that?

A. The material going into the forms is 88 cents in this case.

Q. Now your labor in mixing and moving, and so forth, of the concrete?

A. That is $4.58.

Q. Four and fifty-eight hundredths?

A. Yes.

Q. That is for the concrete?

A. That is concrete. Now the form labor is 62 cents.

Q. And that plus overhead produces your $16.20?

A. Sixteen and twenty hundredths.

Q. Item 6 on the same page also $16.20; is that made up in the same way?

A. Yes.

Q. Are you familiar with the Vang Company unit on this?

A. I have it here.

Q. Will you read it into the record?

A. This shows $16.00.

Q. For what unit; for what item?

A. Item 6.

Q. How about items 8 and 10?

A. Would be the same—no. Item 8 the same; item 10, $24.00.

Q. Do you wish to be understood as being of the opinion that the Vang people miscalculated, or that their price was correct at that time, or it would cost more now to replace that item 10?

A. I would not say; I don't know.

Q. As an appraisal engineer would you say it costs more to place concrete today than it did in 1924 and 1925?

A. I would say that there was probably not much change.

Q. In which way?

A. Well, your sand and stone has not changed; the cement has probably dropped a little; labor was probably higher last fall than in 1924.

Q. Are you speaking in general of labor in the vicinity of Harrisburg?

A. In the vicinity of Harrisburg.

Q. What is the basis of that opinion?

A. Consultation with contractors, and others acquainted with the situation here at that time.

Q. Would you extend that statement as far as Columbia?

A. I don't know about Columbia.

Q. Has the science of handling concrete progressed to an extent that would make it cheaper to build it now than it was then?

A. Well, on this particular type of construction I would say not.

Q. Mr. Johnson, I think you have said you collaborated with Mr. White on the question of accrued depreciation; worked that out together.

A. I discussed it generally with Mr. White, and made a general examination of the bridge.

Q. And you lumped the old fills and that house in with the rest of the bridge in making up your depreciation figures?

A. I believe the total of depreciation is shown in one item.

Q. Well, in making your calculation to produce that one item did you lump it together in your mind?

A. Mr. White is responsible for that depreciation.

Q. Mr. Johnson, you have included certain land in your appraisal on the south side of the river, for instance, do you know whether or not the company derives any revenue from this land?

A. No.

Q. Does that mean you don't know whether they do or not?

A. I don't know.

MR. MATHER:

That is all.

Redirect Examination

MR. HULL:

Q. Mr. Johnson, you were asked the question as to what were the general circumstances which were responsible for a larger unit cost in item 10, page 29, than in item 8, and before you had an opportunity to answer you got into details. Will you just tell us generally what is the difference between the type of construction covered by those two items which makes the second so much more expensive than the first?

A. Item 8 includes the concrete in the piers and abutments. These are large, massive structures with comparatively small and simple form work necessary. Item 10 includes the arch rings, abutment spanner walls, retaining walls at the arches, roadway curbs and cross walls, which involve a relatively complicated system of frame work, and considerably more handling of the material, and are ex-

tremely costly as compared with ordinary pier work. The large item in the cost of frames for the arches was the steel centering, which was obtained from Blaw-Knox. A quotation received from them by us showed that today those forms were costing approximately $25,000 delivered. Does that answer your question?

Q. Yes, that covers it. And the unit costs which you mentioned of the Vang Construction Company of $16.00 for items Nos. 6 and 8 on page 29, and $24.00 for item No. 10 bears out just what you have testified to?

A. Relatively, yes.

Recross Examination

MR. MATHER:

Q. What do you mean, relatively, Mr. Johnson?

A. Relative value of the unit; relative difference in the unit prices.

Q. In other words, roughly you say 16 is to 24 as 16.20 is to 28.15?

A. Well, yes, generally.

Q. Mr. Johnson, there is one item I forgot to mention. Will you explain the estimate you arrive at for taking care of the river. I think you have lumped all that up in 81.82. Will you give us the basis of that?

A. What item is that?

Q. Item 20; necessary coffer dams, including pumping, and so forth, $51,681.82?

A. That is based on an estimated cost of material and labor to build and maintain necessary coffer dams for the piers. Detailed estimates were made of the required material, the number of times

each coffer dam could be reused; the amount of labor necessary to maintain it.

Q. Will you give us the figures?

A. There are several pages of figures here.

Q. Well, do you have sub-totals?

MR. MATHER:

If the Commissioner please, I would suggest if it is so lengthy instead of asking him to read it we, ask the gentleman to produce the detail of this item as an exhibit.

THE COMMISSIONER:

Well, if the respondent is willing to do it.

MR. MATHER:

That will shorten up the time.

MR. HULL:

We will be glad to do it, but we don't know just what you want.

MR. MATHER:

We want to know how he makes up that total of $51,681.82.

MR. HULL:

Do you want all these pages of figures?

THE COMMISSIONER:

He says there are only two.

MR. HULL:

As I see him leafing them over there are about ten.

THE WITNESS:

I did not say two, I said several.

MR. HULL:

You want a schedule showing the detail of that item.

MR. MATHER:

If you please.

MR. HULL:

We will have it prepared.

MR. MATHER:

That is all then with Mr. Johnson, but I will ask the respondent if he will let us have the benefit of the bid sheet on this bridge, and the bid sheet of the Columbia bridge, which Mr. Johnson testified he had before him as part of the basis of his unit costs.

MR. HULL:

What do you mean by having the benefit of?

MR. MATHER:

I would like to have them offered as exhibits in the record.

MR. HULL:

Well, I don't know whether they are material to our case, and we will not offer them unless they are. You can have access to them and if you want to put them in all right. We certainly ought not to be asked to offer something which may be part of their case.

MR. MATHER:

They may be offered as Commission exhibits, if it makes any difference to the company, but Mr. Johnson has testified that he used these to some extent. I think the record ought to show what they were; how much is somebody else's judgment and how much is Mr. Johnson's judgment.

MR. HULL:

Mr. Commissioner, we would most strenuously object to offering in evidence all of the data that goes to make up these calculations. This witness is called as an expert; he has given in answers to questions asked the basis of his judgment, but after

all the resultant fact in evidence before this Commission is the judgment made up from all his sources of information. If we were to put into the record all the details on which he bases his judgment we would have a record here three times as large as it ought to be.

THE COMMISSIONER:

I don't think it is intended to put in all the facts and figures upon which he bases his judgment but one or two items that are questioned. It seems to me that the complainant has a right to those figures to see how that judgment is made up.

MR. HULL:

Our objection is not to that. They may examine the figures, but he is asking us to offer them in evidence.

MR. MATHER:

If they will produce them we will use them as Commission exhibits.

THE COMMISSIONER:

You may offer them if you want to offer them.

MR. MATHER:

Then it is understood, is it not, that Mr. Johnson will produce the sheets which he says he had before him, one the bid sheet of the Clarks Ferry Bridge, and the other the bid sheet of the Columbia-Wrightsville bridge under construction.

THE COMMISSIONER:

We understood Mr. Hull to say they would be submitted.

THE WITNESS:

I have not the official bid sheet of this Columbia bridge. I have a memorandum of certain information that I got, but no official bid sheet.

MR. HULL:

Q. Where did you get it from?

A. I don't recall now. I think it was previously published.

MR. MATHER:

That is exactly what we want.

THE COMMISSIONER:

From where?

MR. MATHER:

He says it was previously published. If he got something published previously in a newspaper that was erroneous, the record wants to show what he got and where he got his information from. That is the reason I am asking for it.

THE WITNESS:

I did not base my figures on that.

THE COMMISSIONER:

Mr. Johnson said he would produce this information.

MR. HULL:

Q. Did you base your conclusions here upon those bid sheets?

A. No.

Q. Why not?

A. They have nothing to do with this particular bridge.

Q. You were here to estimate the reproduction cost new of a bridge at Clarks Ferry under the conditions surrounding the reproduction of such a bridge as of the day you made your appraisal?

A. Yes.

Q. And those bid sheets in the one case of the construction back in 1924 and 1925, and in the other case a construction fifty or sixty miles away under

other conditions were used simply by you as a check on your own conclusions, is that right?

A. They were merely of interest in connection with my working out these units, but had no bearing on these particular unit prices.

MR. HULL:

That is all.

MR. MATHER:

Q. Mr. Johnson, do you mean to be understood as saying that the unit prices bid in 1924 in the construction of the Clarks Ferry Bridge and the unit prices bid in Columbia within the last two years on that bridge, have no relevancy in your opinion to a reproduction cost estimate on the Clarks Ferry bridge in September, 1929?

A. Very little.

Q. One more question. What would have the greater weight as a basis of your cost; would you have any information that would give you a closer comparison than those two?

A. The Columbia bridge is a much larger bridge—

Q. Will you please answer my question directly?

A. What is the question?

(Last question read).

A. My judgment in estimating the cost of this particular bridge.

Q. What would your judgment be based on?

A. On my experience; detailed estimates based on record prices for labor and material.

Q. Your experience being largely in the middle west?

A. My experience being on rivers to a large extent.

MR. MATHER:

I might say, calling counsel's attention to the fact, that in the former case there were eight or nine other bids offered, and the Commission did not consider the prices specified in those other bids offered on this same job by other contractors, as having any weight at all.

JAMES W. WHITE recalled.

Cross Examination

MR. MATHER:

Q. Now, Mr. White, dealing with the question of accrued depreciation, you testified at the last hearing that your item totaled for the four years odd since the bridge was completed $16,282, and was based on what you had observed in the structure?

A. Yes, my opinion was based upon the relative desirability of this bridge and its accessories as compared to a bridge that is built, irrespective of the age of the bridge.

Q. Based on what you had observed?

A. Yes.

Q. Now will you tell us how you calculated the monetary value of your observations to arrive at the estimate you did, ending in 282?

A. The item $16,282, is in reality determined by a percentage of the total value; it was determined without giving recognition to the various defects, and other conditions of the property as observed, and that the amount relatively would be equivalent to about a two per cent deduction on the total value of the property; there being some slight cracking in parts of the bridge; there being some excess in the

old parts of the bridge, properties retained that would not be exactly as reconstructed at the present time; there being some buildings that had some aging, or some defects visible.

Q. Now you say your amount of $16,282, is you say approximately two per cent.

A. That is approximately two per cent of that figure.

Q. Now will you tell us how you calculate your amount?

A. I have not built up a detail of the individual items recognized as going into this, but relative desirability of this a bridge as a whole was given recognition and the percentage determined.

Q. How did you determine that that which you observed amounted to $16,282?

A. A matter of opinion.

Q. Why did you say 282 instead of 300?

A. Either would have been relatively correct. Depreciation at all times is a matter of opinion.

Q. Then it just happened that your opinion produced a figure ending in this odd amount?

A. That is correct.

Q. Now will you tell us what defects you observed which lead you to this conclusion?

A. Well, as I mentioned before I noticed some slight cracks in the vicinity of the toll house, but there was no material loss in value of this bridge visible.

Q. Did you notice steel showing?

A. Steel showing?

Q. Yes?

A. No, I remember seeing no steel visible. There was some slight erosion on account of the ice which

had been remedied by placing certain protection where the ice had eroded slightly, but I didn't see visible any of the steel.

Q. Reinforced steel?

A. I didn't notice any reinforced steel visible.

Q. Did you notice cracks anywhere else except in the vicinity of the toll house?

A. Well, minor cracks.

Q. Did you notice action of the weather in observing the concrete?

A. I did not notice any deterioration in the concrete.

Q. Did you notice the action of the weather in dissolving the salts in the concrete?

A. I did not notice any deterioration in the concrete.

Q. Did you notice any marks on it showing where salts had been dissolved?

A. I mentioned the erosion I noticed; I did not notice any disintegration in the concrete due to the dissolving of the matter in the concrete.

Q. And in arriving at a total observed depreciation of something like two per cent you have included nothing on wing walls; how old are those wing walls do you know?

A. I don't know, and would not have considered it relevant if I knew.

Q. Did you include the superintendent's house in this general total in considering your depreciation?

A. I was giving recognition that the house was not as good as new.

Q. I think you mentioned also you gave recognition to the question of whether or not if it were

reproduced today it would not in point of fact be reproduced in the same way as then?

A. The relative desirability as now constructed and if it were rebuilt was given some consideration, as well as defects that might be removed at the present time.

Q. What do you have in mind particularly that would not be built the way it is now if it were rebuilt?

A. Well, there might be some cost in these abutments that are now serving merely as retaining walls, that simply were constructed as abutments.

Q. Is that all?

A. I think that answers your question.

Q. Would you want to say as an engineer that there is no reinforcing steel showing?

A. I cannot say. I saw no reinforcing steel visible.

Q. Then your inspection was not complete enough that you would want to say whether there was or not?

A. I don't think there is any reinforcing steel visible to any great extent.

Q. But you are not sure?

A. I cannot say positively. There might have been a bar exposed at some place, but I don't think there was any great amount of it exposed.

Q. What do you estimate as the life of this bridge?

A. Well, that is somewhat problematical. Physically it might have a life of fifty to one hundred years; economically it might have a life of not over twenty-five years, depending upon the traffic that comes over the bridge. It might be abandoned or

it might be taken over by another bridge being constructed, that would detract from its value.

Q. Did the question of life enter into your calculation in the amount of depreciation?

A. Not at all.

Q. This observed depreciation as I understand you would be the only thing that you would deduct from this reproduction cost to determine what it is worth today?

A. Yes, practically so.

Q. Are you aware of the fact in arriving at your conclusion that the man who built the bridge claimed an allowance for depreciation amounting to two per cent per year?

A. That would be a factor of no importance in determining the present condition of the bridge. It might be of importance in determining what would be necessary in replacing this bridge at some future time, but it would have nothing to do with its condition at the present time.

Q. I take it then that your first answer to my question is, "Yes, but in my opinion it is immaterial."

A. Practically so.

Q. Mr. Masters not only built it but he designed it, didn't he?

A. So I understand.

Q. In arriving at your allowance for accrued depreciation, were you aware that the company has actually been setting aside sums which total about $77,000 for this purpose since the bridge was built?

A. I was not aware of that fact, neither would I have considered it relevant.

Q. Now, Mr. White, I think, if I recall, you tes-

tified at the last hearing that in considering the reproduction of this bridge you have assumed that all the highways that are there now would be there, and that as soon as the bridge were built it would have some business waiting. Now is that correct?

A. Practically that is the assumption, because we are not assuming that the reproduction of the highway would be necessary. If such was the case, of course, there would be a period there during which this bridge would be earning no return until the business was back, but it hardly seems logical under the existing conditions that you would have to wait for the construction of the highways.

Q. Of course, the existing conditions that are there are as they always have prevailed there?

A. The existing conditions to which I have referred is the fact that the highways approach to this point at the present time; they may have been approaching it, however, on the former bridge too, due to the method of transportation at that point.

Q. Well, you, of course, knew, as you stated in your report, that the original bridge there was built by the Commonwealth something over one hundred years ago?

A. So the records of the bridge company reflect.

Q. Now, in your items for promotion and organization you ask for each of those items an allowance of $10,125?

A. Yes.

Q. That, as I recall your testimony, is based on your general experience on the necessities and difficulties in obtaining interest in a new business and getting money into it?

A. Well, it is necessary promotion by some in-

dividual who gives his time and gives his service to promoting a new enterprise, and the next necessary promotion being the regulatory authorities and expenditures made in connection with meeting the cost of launching the enterprise.

Q. And I take it those figures give no particular weight to the fact that there was always a bridge there, for one hundred years or more, and that this company actually came into existence, and acquired money to build the bridge with very little trouble.

A. Well, of course, the existence of the bridge there gave them some history to work on. The assumption that I am using in reproducing this property, is assuming there is no history back of this enterprise; that there is no permission to build this bridge; that the permission to build this bridge would be acquired under the existing conditions as of the date of the appraisal. Of course, there was no expenditure, I presume no great expenditure, I would say for acquiring rights at the present time, because the rights were already existent at the time the appraisal was made.

Q. Now your item for cost of financing is likewise based on your general experience and opinion, is it not?

A. Largely.

Q. Now, do you know that as a matter of fact when this company was organized, and at various times after that when it built this new bridge, it floated a bond issue of $450,000, and its expenses in doing that were approximately thirty-two to thirty-three thousand dollars?

A. The expense of doing that was something around thirty-one thousand dollars. As I under-

stand a portion of it would be considered as the cost of financing, eliminating the bond discount it would be at a figure less than par, that would represent, for the money that was assembled for this bridge, about thirty-one thousand dollars at that time.

Q. And the common stock was sold without expense to the company?

A. I would not be able to say as to that. I would judge that the promoters of this scheme may have had to put forth considerable effort and investigation before they were satisfied that they were willing to take this common stock, and considerable more effort would be necessary if they were selling this common stock to outside individuals. Whether they did have that charged on their books or not is a matter of no importance. The financing of this company or enterprise at that time would have required the expenditure of money and effort in addition to the amount that was paid for financing and the sale of their bonds, in my opinion.

Q. In arriving at your present cost of financing were you aware of the facts involved in the refinancing of 1929?

A. I was not at the time this was arrived at, neither would it have been relevant because the financing of 1929—the bridge had a history, and as bankers usually tell you the operating statement is more important when they come to decide whether they will loan money or not. If this bridge was just being financed there would be no history that would assist in the selling of your securities or common stock.

Q. Your item of financing makes no claim for bond discount, so called, as I understand it?

A. No, sir. Any discount added to the rate of return on the bonds would not be recognized.

Q. Now, Mr. White, your interest during construction. Will you tell us how you calculate the amount of $38,145?

A. Well, the interest during construction was computed on the basis that it would require about sixteen months to construct the structure; that the moneys would be expended during that sixteen months in such manner that it would average—about half the money would be expended for the whole time, or the whole amount of money would draw interest for half of the time. The basis was that the purchases might have been made in excess during the first period, or they may have been made somewhat in excess during the latter period, but interest on the money would have been drawn for half of the time, and that is more or less accepted as a principle in calculating interest during construction.

Q. What per cent did you use?

A. I used eight per cent as being the minimum return that an enterprise of this kind would demand to attract money to this project; that the risk of loaning money on this project would be continuing upon the project itself without any support from other sources. Money might have been obtained for a less rate of interest than six per cent by the owners of this bridge through pledging their property or otherwise, but borrowing on this bridge strictly, my thought was that a fair return would be not less than eight per cent, and interest during construction has been computed on that basis. The eight per cent for half the period would give about five and

one third per cent, and I use five per cent on the value of the property as being a fair allowance for interest during construction.

Q. Why take sixteen months as the construction period?

A. Primarily that is what I would consider would have been a reasonable period for the construction of this bridge in normal conditions.

Q. You would not assume any effort to get within a lesser period in order to avoid seasonal weather conditions?

A. No. A shortening of that period I think would have resulted in an increased cost. It is possible that it could have been constructed in a year, but under normal conditions I would figure sixteen months would be a correct period for this bridge construction.

Q. Do you know how long it actually took to build the bridge?

A. Something less than sixteen months.

Q. How much less?

A. I don't know the exact time, but the contractor had a sixteen months specification in it for the construction of this bridge, I believe.

Q. Your item for attached business value, as you call it, was based wholly on the loss of fair return prior to the completion of the structure was it not?

A. From the beginning of the construction to the completion of the structure; this period might have been extended over the promotion and development period, but as a conservative figure we only extended it over the construction period.

Q. Mr. White, in the American Appraisal Company's report, there is some reference made to the

highways that have been built and might be built, and their possible effect on the revenues. Do you or Mr. Johnson know anything about highway use or traffic conditions in this part of the country?

A. Personally I made no investigation of the traffic conditions. I think that Mr. Johnson made some investigation on that question, but personally I did not.

Q. Then as far as you know yourself you don't know any basis for that statement in your report?

MR. HULL:

What is the statement, Mr. Mather?

THE WITNESS:

I would have to look at the statement.

MR. MATHER:

I am referring to a statement here that in times past highway changes have helped business, but changes that are likely to be made in the future will probably be detrimental. I cannot give you the page unless it is pages 9 and 10—at the top of page 10 it is,

MR. HULL:

What is the question in regard to that?

THE WITNESS:

If you ask that question specifically it may be I can answer on that.

(Last question read).

A. I would have to ask again what statement you specifically refer to, Mr. Mather.

MR. MATHER:

The first new sentence beginning on the top of the page.

THE WITNESS:

Page 10?

MR. HULL:

Mr. Mather, does not the report itself in the balance of pages 10 and 11 specify in detail the possible prospective highway improvements which lead to the conclusions stated at the top of page 10?

MR. MATHER:

What I am driving at, Mr. Hull and Mr. Commissioner, is what these gentlemen from Milwaukee know about what highways are going to be built in this part of Pennsylvania.

THE COMMISSIONER:

This witness has already said he made no investigation of any kind. Now, if he made no investigation of any kind, of course, he knows nothing about it.

MR. MATHER:

Q. You know nothing about this statement?

A. No.

Q. I think you said Mr. Johnson made some investigation about the thing?

Q. He made some investigation of the roads that approach to this point, and so forth.

MR. MATHER:

That is all, Mr. White.

I think I would like to ask Mr. Johnson the same question.

MR. HULL:

Recall him.

PAUL B. JOHNSON, recalled.

Cross Examination

MR. MATHER:

Q. Mr. Johnson, did you make any investigation as to what highways were likely to be constructed

in this part of Pennsylvania, which would be the basis of the statement on page 10 of your company's report?

A. I talked to local people regarding the possibility.

Q. What do you mean by local people?

A. Well, I talked to various people at Duncannon, several people in Harrisburg. I talked to representatives—

Q. You mean local representatives of people who are traffic engineers or familiar with the thing from a technical knowledge?

A. Both. I talked to representatives of the Highway Department here, I think, in a general way.

Q. Who?

A. He was the bridge engineer, I think.

Q. Do you remember the name?

A. No, I don't.

Q. Was it Mr. Brandow?

A. That name sounds familiar, yes.

Q. What did he tell you as the basis for this conclusion?

A. Well, I think probably I learned from him that they were expecting to build a road on the east side of the river within the next couple years.

Q. That is the east side of the river north of Clarks Ferry?

A. Yes.

Q. In the next couple years, did you say?

A. I understood him to say two or three years. There was nothing very definite about it.

Q. But other than that your statement is generally hearsay in the vicinity of the bridge?

A. There is nothing there except what we learned generally by way of contact here at that time.

MR. MATHER:

That is all.

NATHAN B. JACOBS, a witness called in behalf of the respondent being duly sworn was examined and testified as follows on

Direct Examination

MR. HULL:

Q. Mr. Jacobs, where do you live?

A. Pittsburgh, Pa.

Q. What is your business?

A. Civil engineer.

Q. A graduate of what school?

A. University of Pittsburgh.

Q. In what year?

A. Nineteen hundred and fourteen.

Q. Since have been engaged how?

A. Engaged in the practice of my profession with Mr. Morris Knowles, and our organization is known as Morris Knowles, Incorporated, of Pittsburgh. I have been engaged in the practice of my profession in connection with municipal and public utility engineering.

Q. Have you devoted a considerable part of your time to public utility problems?

A. I have devoted practically all of my time to public utility problems and municipal problems pertaining to municipally owned utilities, involving not only questions of investigation for, investigation and construction of, but also the question of operation, and to some measure the valuation of properties in the determination of annual budgets and require-

ments of their operation.

Q. Have you qualified as an engineering expert, and has your testimony been submitted to this and other Commissions in the country?

A. Yes.

MR. HULL:

Do you desire to cross examine Mr. Jacobs?

MR. MATHER:

On his qualifications, no.

MR. HULL:

Q. Now, Mr. Jacobs, will you state just what part of the present problem you were asked by the respondent to investigate?

A. We were asked by the Clarks Ferry Bridge Company to investigate the question of the annual allowance requirements for annual depreciation, and incidentally in connection with which to set forth the cost of maintenance.

Q. Now, will you take up first the question of the annual charge for maintenance, and tell us first how you distinguish between that and your charge for depreciation?

A. We distinguish between maintenance and depreciation in that maintenance represents repairs or reconditioning, while depreciation represents major replacements, or possibly a complete replacement of a structure. Maintenance are those things which occur during a cycle of years during which the structure itself in its major portion would receive no major replacement. Maintenance are the replacement of those units, the repair or reconstruction of those units which normally would be expected to be repaired or replaced during the life of the structure. The depreciation is the amount which an-

nually represents the portion of the original structure, the cost of which enters into your operating budget. In other words, a fixed capital item is merely a deferred operating item. Eventually the fixed capital must be taken care of through the operations of the company, just the same as an inventory item would eventually find itself in the operations of the company, and depreciation is taking care of those items which are originally capitalized. Maintenance is the restoring of items and not necessarily affecting in any way the capital account.

Q. Now, Mr. Jacobs, what examination of this property did you make in order to determine what in your opinion was a reasonable allowance for maintenance?

A. Well, I have been familiar with this bridge I think since its construction, spending a great deal of my time, as I did, in this vicinity. I have examined the bridge rather carefully, not in the detail that I would if I were to determine, for instance, its observed or present condition, but sufficiently enough to see what its condition is in a general way at this time. I have also considered what the experience has been generally throughout Pennsylvania where I am more or less familiar with structures in regard to the maintenance of reinforced concrete structures of this character, and on the basis of that and considering the roadway condition of the bridge, I tried to make up my mind as to what is a reasonable allowance there over a short period of years, something less than the entire life of the structure, would be required for maintenance. That is bound to be a very small amount in the first

years, but our experience with concrete indicates that as a structure increases in age, there probably will be a larger increase of expenditures for maintenance work. The first item which, of course, is very evident to any one is the bridge floor, or the roadway itself. This bridge is designed with that thought in mind, and probably within the next five years a new roadway will have to be constructed. The bridge is designed so that that roadway can be constructed right on top of the present floor slabs. That is a matter of maintenance, taking care of that roadway across the bridge. There are evidences, and we know from experience with practically all concrete structures that there will be erosion; weathering effect due principally to the fact that water will penetrate the concrete, get into the steel and cause corrosion. What is known as water proofing is required and in some cases where it has been very bad gunniting has been required. These are deferred maintenance costs that will occur over the whole life of the structure. Now although that will not be evidenced now by any examination of the records of account, because the structure is there now, yet that should be considered in determining on a budget for the operation of a structure of this kind which is a public utility.

Q. Now, as a result of your examination and the experience you have referred to, what in your opinion is a fair annual allowance for maintenance of that structure?

A. I would say that the Commission's allowance of $1800 is a fair allowance if it is not necessary to water proof the structure, but if water proofing should be necessary then to consider water proofing

as an additional fixed capital item at the time it is made. Water proofing would cost in the neighborhood of $45,000, and would be a rather considerable item. But leaving that out of the question I would say that the $1800 to take care of the roadway replacements, and to take care of such repairs as chipping and putting in new concrete as would take place that $1800 would be fair. I feel that a company like this on its books should reflect some reserve for roadway maintenance, even though there has been nothing expended within the last four or five years. There may be some accounting reason why that cannot be done, but as an engineer it would appear to me a very wise precaution.

Q. Now, Mr. Jacobs, it would appear from an examination of the accounts of the company over the past four years that the amount expended annually for maintenance is running from three to five hundred dollars, and not $1800. Now, notwithstanding the actual expenditure during the past three or four years, you are of the opinion that annually an allowance of at least $1800 should be set aside.

A. Yes. May I explain a little on that, Mr. Hull?

Q. Yes, explain it?

A. The books, from the report of the auditors which we had, do not reflect this item which I had in mind which is probably an item in your maintenance, that is, roadway. There have been some very minor repairs of roadway approaches, but they are only a few dollars, and I think that most of the money which you have referred to is more replacement, light bulbs and minor electrical expenses and things of that character.

MR. MATHER:

I suppose tarring cracks is about the most important.

THE WITNESS:

Yes, tarring cracks was on and near the approaches, not on the bridge structure possibly, but it is a cost of maintenance there. Those are minor, but what will occur through the operating history of the company, and probably I think within the next few years, the big item will be flooring, the roadway.

MR. HULL:

Q. Now, turning to the matter of depreciation. First, Mr. Jacobs, according to what method, in your opinion, should depreciation in this case be estimated?

A. Straight line.

Q. Will you state why?

A. The straight line method of depreciation is preferable in a utility of this character to any other method with which I am acquainted. In the first place it is the simplest; it does not require the building up of any theoretical or actual sinking fund, or retirement reserves. The utility is not that kind of a public utility which is continually growing and has a place in its own business for the reinvestment of its funds, so that the reserve is actually a cash reserve in this case, and not a reinvestment in the growth of the utility. The only utilities that figure on the sinking fund basis are the water companies, and in some few instances gas utilities. Those are utilities where their annual financial requirements for additions and extensions are very great, and therefore they take the depreciation earn-

ings and set them up through reinvestment in their own properties. Years ago they used to have what was known as a sinking fund in connection with public utilities. I know of but very few companies, and I think I know most of the water companies in Pennsylvania, and in all my experience I think I knew of no more than two that actually had sinking funds. Modern methods of financing did that and it was an inefficient way to operate and they have abandoned it. There are no facilities of the bridge company for reinvestment of those funds in additions to the plant, and therefore we may as well disregard the compound interest, or sinking fund method, all of which contemplate the reinvestment of the fund. The sinking fund, of course, contemplating the reinvestment of the depreciation in a low rate of interest security in other companies. While all of the newer methods of depreciation, and those which were recommended and considered, not necessarily considered, in the reports of the American Society of Civil Engineers on valuation have been on what is known as the compound interest method, rather than the creation of any sinking fund, therefore, in a bridge there seem to be very good reasons why it is impossible or inadvisable.

Another reason in this particular bridge is the fact that a bridge is part of our general transportation system, and the history of transportation has not been a particularly happy one. The growth of our transportation companies has been rather a competitive growth, rather than a monopolistic growth such as our water companies and our gas companies. Particularly the artificial gas companies look forward to a rather continuing increase in

business for any community that is developed. If they lay a line down the street the reasonable assumption is that the business from that line, as a line, if left in service, will continue to increase, and during its later years it will be able to earn even more allowance for depreciation than what it does during its early years, and therefore, these compound interest methods are more applicable, because the compound interest methods mean a very increasing amount of annual depreciation as the property gets older, so that the amount of annual depreciation in the tenth year will be considerably greater than it would be the first year, but that is not the fact in transportation. Transportation is competitive. A man goes into the field first and very often earns more than what he does later when other means of transportation, competitive transportation, come in. We have seen it in the railroads, certainly have seen it in ferry boats, ferry lines, and I think we will see it in bridges. I think in this particular bridge they ought to make their depreciation charges as high in the beginning as they can. Pennsylvania is going to grow, and there will be competitive routes developed. There is plenty of evidence of that. The straight line depreciation is continuing if you have depreciation each year, and it is the form of depreciation in which the charges, the total carrying charges are highest in the beginning, and the total carrying charges consequently less in the end of the life of the property, while in any form of compound interest depreciation the opposite is the fact.

Q. By this competition which you refer to, do you include both the possibility of the erection of

other bridges in competition, and the development of highway routes which would avoid the use of this bridge altogether?

A. I think the most important is highway routes. There is the possibility of a bridge between Sunbury and Clark's Ferry and always has been; there is the possibility of a better route from New York, for instance, to the West, going north of Clark's Ferry, but that is a possibility, but the building of paralleling highways on the east and west banks of the Susquehanna River are an absolute necessity, they are not possibilities, they are probabilities.

Q. And the effect of those highways upon this bridge you include then in your idea of competition?

A. I certainly do, and think they are very important items.

Q. Now, turning to the rate of depreciation. First, what in your judgment, Mr. Jacobs, would be a fair, conservative period of years which the owners of this bridge might expect the bridge to remain useful?

A. I would say from forty to eighty years. If I were going to figure on it I would not figure on over forty.

Q. Will you tell us whether there is a concrete bridge that you know of in the country that is as old as forty years?

A. Not that I know of, no.

Q. Mr. Jacobs, what concrete bridges do you know of less than forty years old upon which very large amounts of money have had to be spent or about to be spent for their maintenance and rehabilitation?

A. The one with which I am most familiar was one that I watched being built. We had a project on the other side of the river where this bridge was being built and it is the Haith Run bridge in Pittsburgh. That bridge was built in 1913, and it will have very extensive, or they are having very extensive improvements made to it right now due to water eroding the concrete. Now, there are other bridges where there are little or no signs of weathering of the concrete, but we know that concrete has not had the experience which would justify any assumption as to exceedingly long life like masonry, and we know that prudence in the upkeep of structures indicates that waterproofing, or stone facing or protection is going to be just as necessary for concrete as it is for steel. Steel has to be painted periodically, and I think that concrete will require a similar treatment.

Q. You are familiar with the Mulberry Street bridge in Harrisburg?

A. I have seen the Mulberry Street bridge, and I know something of the difficulties they are encountering. Those are examples. The bridge in Birmingham, Alabama, that had to be completely gunnited. Those are examples of where concrete has failed. There are very many good examples of excellent work on concrete bridges, where the inspection and observation of them would indicate but very slight depreciation, and the maintenance has been extremely low, as would be indicated when you say that the maintenance of this bridge would be $1,800 a year, which is something around two-tenths of one per cent. of the cost. That is an extremely low figure and I don't know of anything,

any other kinds of structures that are maintained at such a low cost.

At 12:25 p. m. the Commissioner declared a recess until 2:00 p. m.

After Recess

NATHAN B. JACOBS, recalled.

Direct Examination

MR. HULL:

Q. Mr. Jacobs, what is this process of gunniting that you referred to this morning?

A. On structures which have begun to show evidence of erosion, and on other structures, particularly hydraulic structures, where you want to be sure that there is no opportunity for water to permeate through the concrete, either attacking this reinforced steel or a leakage, such as in a reservoir or dam, gunnite has been resorted to for the last twenty years. It is a process by which a mixture of sand and cement is forced, under high pressure, through what is known as a cement gun against the surface, forming a thin layer which is very hard and very impervious to water and protects the structure, providing there are no other elements, such as settlement, which would crack the gunnite, the internal stresses in the structure, but under ordinary conditions gunnite is a usual method of protecting structures.

Q. Is that an expensive process?

A. No, it is not considered very expensive. It costs about twice as much as ordinary waterproofing.

Q. I believe you said this morning you had an estimate of waterproofing this structure which amounted to about $46,000?

A. Forty-four to forty-five thousand dollars, and therefore, to gunnite it would probably cost double that. Of course, that did not include roadway, we didn't figure on that in any case.

Q. Now, Mr. Jacobs, will you just state briefly what is the cause for physical depreciation of reinforced concrete?

A. Well, the general cause of depreciation of reinforced concrete is the action of water on the reinforcing steel, corrosion of steel set up and stress, or a chemical corrosion which seems to eat the concrete away which is covering the steel, and you can notice it if you will inspect this bridge carefully. You will notice if you were just even to drive across slowly, you will see brown spots forming on the bridge, and those brown spots are evidence of corrosion of the steel. That is iron oxide, the brown spots, where that takes place and that action will tend to erode or wear away the concrete. That is the principle cause of depreciation.

Q. How does the bulk of the ferrous oxide compare with the bulk of the original steel.

A. Very much greater. Ferrous oxide and ferric oxide are both spongy and light in specific gravity. They expand thus forcing and breaking away the concrete. You can find evidence of it by what we call fine, hard cracks in the concrete.

Q. So that the formation of this oxide inside the concrete has much the same effect as the formation of ice in the concrete?

A. It has very much the same effect as freezing,

that is the expanding of the water, which forms ice in changing its volume.

Q. Mr. Jacobs, what do you know of the experience with the use of concrete in the construction of dams?

A. Isn't that a rather large question?

Q. Well, with respect to the length of life of such structures.

A. Dams are long life structures. The dams that we know of in this vicinity are primarily earth dams, and concrete represents the appurtenances and but part of the entire structure. That concrete will have to be maintained, repaired and kept up in order to make the concrete live the life of the structure as a whole. I have seen dams around here, solid concrete a few, that don't stand up as a usual thing as compared with the masonry structure itself, stone masonry or earth. In fact, we used to cover a great many of the earth dams, paving them with concrete, but we find as a usual thing that you can do better by using masonry.

Q. Now, Mr. Jacobs, from your experience and your study of this particular problem, will you tell us what allowance in your opinion should be made by the respondent company for annual depreciation?

A. Two and a half per cent. of the depreciable property.

Q. On the straight line basis, I think you said?

A. I think I stated that.

MR. HULL:

You may cross examine.

Cross Examination

MR. MATHER:

Q. I take it, Mr. Jacobs, you are advocating the

use of the straight line method as against the sinking fund method for bridge properties in general, rather than this particular bridge?

A. There are very good reasons why it should be in general. I was advocating it because I was thinking of this bridge primarily; I did not give any consideration to any other bridge, but as a class, I should think that bridges as a public utility would want to use the straight line basis.

Q. Do you apply that to other long life properties, such as dams, to which you made several references?

A. No, I don't, because dams are private water works. The economic development of water works is just about the opposite of the economic development of transportation.

Q. Then to your mind the advisability of the one or the other of the two methods is in particular based on the possibility of investing the sinking fund in its own property?

A. That and the earning capacity.

Q. Now, in applying straight line methods to this bridge in particular as you say you had in mind, why this bridge in particular?

A. Because my detailed study has been as to this bridge in particular and I would not want to generalize from the particular.

Q. You referred to the period of forty years as the life of the bridge?

A. Forty to eighty years.

Q. When you say forty, you mean the new bridge or the bridge that exists today?

A. The bridge as it exists today.

Q. And you would say that the bridge in this

case yearly depreciates approximately two and a half per cent. of its value today?

A. No, I didn't say that.

Q. Well, now, what do you calculate as the total life of this bridge, you might say from the general point of view, considering all things?

A. I consider that the general life of this bridge is approximately forty years. I think that is the safe life that any one can figure on, that is thirty-five years from today, practically. I don't know but what that may be confusing with your former question when you spoke of the bridge forty years from today or forty years from the date of construction. I would say that forty years from the date of construction I think is as long a period for any structure of this character as I would want to look forward to, and I am influenced considerably as an economic proposition as well as the actual depreciation.

Q. Then it would be your thought that in order for the company to be safeguarded it should set aside something which is equivalent to two and a half per cent. of its original value?

A. Two and a half per cent. of its value, whether it was its original value or present value—

Q. I am speaking of the depreciable part of it, of course?

A. Yes.

Q. Now, in regard to your allowance for maintenance, as I understand you are not suggesting that the company within the next year would have to expend $1,800, but that the full amount of $1,800 should be made available for maintenance, even though it were not actually called upon to expend

that amount, and the remaining should be available for the additional maintenance that would be incurred as the bridge gets older?

A. I think so, yes. In other words, the big element of maintenance is roadway; maintaining the roadway itself.

Q. Now, you said that the $1,800 per year would apply for a comparatively short period, less than the total life of the bridge, did you not?

A. No, I don't think so. I think that over the life of the structure the average maintenance year in and year out would be about $1,800 a year, but if you want to split it into smaller units, say that the average for any ten years would be $18,000.

Q. In ten years you are using it?

A. Practically in ten years after the first ten years because the big element is replacement of the roadway, and I would say that that would have to be done at least once in ten years; that would represent, I would say, over half of the total cost. You understand that the replacing of the roadway is the building of a waterproof roadway on top of the present floor slabs; it does not mean tearing off those slabs and putting new ones on.

Q. That would mean asphaltum of some kind?

A. Yes.

Q. Now, Mr. Jacobs, you would then say that within the next year the $1,800 would not have been necessary to maintain it, but that the bridge would indicate signs of incurred liability of greater expense later, because in the later years it would cost more to maintain than it does today?

A. That is true.

Q. Then if you had been advising the company

as to its proper basis of action back in 1925, when the bridge was opened for use, you would have advocated them setting up a maintenance allowance of approximately $1,800 a year in order to meet the additional expense they will have in the future, is that correct?

A. Yes, I think that is a fair way to state it.

Q. And you would have done something similar in regard to the depreciation?

A. Yes.

Q. Now, Mr. Jacobs, following your theory that a straight line method is desirable for this bridge, how would you follow that theory to determine the accrued depreciation at any given period in the life of the bridge?

A. I would not follow that theory in determining the accrued depreciation. I think accrued depreciation is a matter of determining by inspection and examination; annual depreciation is a matter of accounting.

MR. MATHER:

That is all.

Redirect Examination

MR. HULL:

Q. Right on that point, Mr. Jacobs: There is no necessary connection then between this allowance of two and a half per cent. for annual depreciation and the amount of observed accrued depreciation that Mr. Johnson and Mr. White have referred to?

A. I think they are entirely independent.

FRANK M. MASTERS, a witness called in behalf of the respondent, being duly sworn, was examined and testified as follows on

Direct Examination

MR. HULL:

Q. Mr. Masters, where do you live?

A. Harrisburg.

Q. What is your profession?

A. Consulting engineer.

Q. What has been your professional training?

A. Well, I have attended a couple technical schools, I am not a graduate. I went to Cornell, and to other technical schools, night courses, and I have been practicing my profession since 1904, that is, as associate and partner of Mr. Ralph Mojeska.

Q. Your office I believe is in Harrisburg?

A. Yes.

Q. You are a member of what professional societies?

A. The American Society of Testing Materials, the American Society of Civil Engineers, Concrete Institute, Franklin Institute, and two or three others. I don't remember them all.

Q. I believe you designed and supervised the construction of the Clark's Ferry Bridge, involved in this case?

A. I did.

Q. Some question was raised here in cross examination this morning concerning the new rights which had to be acquired by this respondent company at the time that it constructed this new bridge, and the inference from counsel's questions was that

no such new rights were necessary. Will you just tell us whether that is the fact or not?

A. Well, the Federal permit is not a continuing right, so that in order to reconstruct this bridge on a new location it was necessary to secure a new act of Congress; have hearings before the War Department; secure the approval of the Federal government. This bridge is authorized by Congress and by an act of Congress. It is a Federal and not a state bridge in that sense, but at the same time on account of state control over the streams it was necessary to secure permits and rights from the State of Pennsylvania, which we did, that was the Water and Power Resources Board, I think it is now. At that time it was the Department of Forests and Waters. In addition to that we secured approvals throughout the work of the Highway Department. Everything that was done was submitted to them for approval.

Q. I believe you had to obtain the approval of the State Art Commission?

A. Yes, and the State Art Commission. It was passed on by the architects.

Q. And all these approvals had to be obtained in exactly the same form as if there had been no bridge at Clark's Ferry before?

A. Absolutely.

Q. And the only right carried over from the old bridge, or the only right that the company had before and used now was the charter for operating a toll bridge?

A. I am not sure that that continued, but I am under the impression that there was a new charter right secured for the present bridge. I am not posi-

tive on that point, but the old charter I do not believe was continued in force. I had a copy of it.

Q. I think you are right, now that you mention it?

A. Yes, I think they secured a new charter because I prepared a lot of data and information on the subject I know; organized a new company and everything.

Q. So that they had all that preliminary work to do just as if there had been no bridge here before. Reference was made also to the obtaining of fill for the approaches. Do you know in fact where the fill was obtained for these approaches?

A. The greater portion of the fill for the approaches came from the quarries at Steelton; was shipped in by car. There was some, I believe, taken out by truck, their borrow pit up the road, but not much of it.

Q. It was suggested here that the fill might have been dredged more cheaply out of the bed of the river?

A. We tried that; the contractor tried to get it out that way and it was not available, and we could not do it, we could not get a steady flow. I believe on the Duncannon side there was a little bit pumped out of the river, a very small portion of it, and the rest of the fill on the Duncannon side—I believe you are referring to that end of the bridge as the north end of the bridge—was shipped in by cars, unloaded on side tracks in Duncannon and hauled to the bridge site and placed.

Q. The bed of the river there is mostly rock, isn't it?

A. Mostly rock. The fill was required at sea-

sons of the year when it was practically impossible to go into the river and operate and do anything.

Q. Some reference was made this morning also to the net cost of getting rid of the old bridge and those piers. Have you any knowledge as to what the estimated and actual cost of that work was?

A. As I recall the matter I estimated that for the company; that if the company dismantled the bridge as required by the State Department of Forests and Waters and the United States Government, which insisted that those piers must be taken down to a point at least four feet below the low water mark, I estimated that the cost would be not less than, I believe, twenty-five or thirty thousand dollars, and they were very much worried about it. They asked me to get them some price and I did that, and they were all over the map. They took the matter out of my hands. They sold the wooden bridge to some local party, and that party put in a saw mill and salvaged whatever he could from the wooden portion. They have not yet dismantled or removed the piers as required by these government permits, and they stand there as more or less of a hazard today.

Q. So that the work for which you made an estimate of cost has not been completed?

A. No, sir.

Q. Did you ever see this Complainant's Exhibit No. 2 before, Mr. Masters?

A. No, I have not seen this (Indicating Complainant's Exhibit No. 2) as prepared here, except this morning when I glanced at it.

Q. Well, you cannot tell then whether that is a correct copy of your final estimate or not, can you?

A. No, I cannot.

Q. You have a copy of your final estimate in your office?

A. Yes, it is in the files.

Q. Mr. Masters, this morning one of the witnesses was asked to produce the bid sheet of the Vang Construction Company on the Clark's Ferry Bridge job?

A. Yes.

(Bid sheet, Vang Construction Company, Clark's Ferry Bridge, produced and marked Respondent's Exhibit No. 2, E. E. M. 4/10/30.)

MR. HULL:

Q. Mr. Masters, I show you a blueprint marked Respondent's Exhibit No. 2. Will you state what that is, and just explain it?

A. This is a tabulation of the actual bids received from various contractors on the job as presented to them for bidding and gives the contracting specifications that were used as a basis for awarding the contract.

Q. This gives, or specifies the several items of construction which went into the complete job, and gives the several contractors estimates as to the cost of each of those items?

A. Yes. This is what we estimated, shows what we estimated would go into these items of construction; this is not what went in. These are unit prices on the job.

Q. What was estimated?

A. Yes. And on that estimate of quantities, multiplied by the amounts they bid for the various units we arrived at a total of the various contractors' bids, and then determined later the bidder who

was successful, and the contract was awarded on the basis of the summation of the totals.

Q. Now, Mr. Masters, will you just tell us what you did with respect to the Vang Construction Company between the time the bids were submitted and the time that their contract was entered into?

A. This tabulation I think shows thirteen concerns bidding, taking out plans to bid on the job, and there are, I guess eight of those concerns put in bids. It was a private bidding job, not a public job; it was not advertised. We were very anxious to secure good bids and keen competition, and I invited good contractors to give me bids on the work. It so happened that there were two concerns that I knew were bidding bitterly against each other, the Culbertson Company of Cleveland and the Yang Construction Company. They had been bidding on the Delaware River bridge piers and I got them to come in here, both of them strangers to this community and give me a bid on this job. I got very keen competition between them. The Vang Construction Company turned in their bid on the date—I don't remember just what the date was—he left town, Mr. Lee, their estimator that made up the figures, and after he was gone I received a wire from him from Altoona, telling me that he had made a serious error in his bid, and asked my permission to increase the amount of his bid, which was to be applied, I believe, to the arch rings, a matter of from twenty-four to thirty-four thousand dollars, I don't remember the exact figures now, on account of the fact that he had reread the specifications and found that my specifications required the use of four sets of steel centers, that is, reinforced by four sets of steel

centers instead of two that he had used in his bid. That is the excuse he gave for increasing it. I added this to his bid item. On opening the bids he was the low bidder at $501,546, which was nearly $100,000 below any of the other bids. I knew the Vang Construction Company were excellent contractors, and I had a very high regard for their bidding generally, but I was quite concerned about this large discrepancy. We have a rule that we will never wish a losing job on a good contractor, which hurts our professional standing. I called in Mr. Vang himself and their estimator, Mr. Lee. I showed them the tabulation of the bids and called their attention to the fact that they were nearly $100,000 below the next bidder, and I said, "Now, you can withdraw your bid if you want to." I said, "I don't want you to lose money." They took some time to consider the matter. In the meantime I got hold of Mr. Culbertson, who is one of the most accurate and careful estimators on the job that I know of. I asked Mr. Culbertson to show me all of his working papers and estimates, which he very kindly did. He said, "I cannot figure the job a penny below that bid," but he did put in three or four other propositions whereby he was willing to do the job at cost as shown by his bid and divide any profit over a certain amount with the owners if they could effect a saving that way. I had that proposition before me when Mr. Vang came back with his estimator, and he said, "Masters, I made you an awfully low bid." He said, "I have a lot of equipment standing idle," and he said "My only hope of coming out on this job is to finish it ahead of time and make you pay me a whole lot of bonus." He said, "I will take

my profit out of the bonus, because with the amount of equipment I have here to put on this job which is idle now I can lick the river." That was his expression. When we finally settled with Mr. Vang he told me he had taken his licking from the river and did not lick the river. Those are the circumstances about the bidding.

Q. Mr. Masters, did he employ in this work an unusual amount of equipment?

A. He did. He had three of the very finest type locomotive cranes on that job all over in the river there, and he built himself a double track railway trestle across the river. All the other contractors in figuring on the job figured it would take them the full length of time and maybe a little more. Of course, they were going to employ much less equipment. He put upwards of $200,000 of equipment on the job and jeopardized a great deal of it in the river just to do a half million dollar contract.

MR. HULL:

I offer in evidence Respondent's Exhibit No. 2.

MR. MATHER:

No objection.

THE COMMISSIONER:

Admitted.

MR. HULL:

Q. Mr. Masters, what do you consider the fair, safe average useful life of a concrete bridge?

A. From thirty to fifty years.

Q. Now will you tell us some of the concrete bridge work that you have been engaged on, that you have considered in making that estimate.

A. Well one of the earliest pieces of concrete

work done by our organization are the bridge approaches to the Thebes bridge, that is a large railway bridge over the Mississippi river below Cairo. The concrete arches in that bridge were built in about 1903 or '04, I should judge, just prior to my connection with the organization and they are today in very bad shape. I have been recently told, although I have not seen those particular arches myself that the cost of repairs to those arches will possibly exceed the original cost.

The Metropolis bridge, which we finished, I believe in 1916 or '17—

Q. At what place?

A. At Metropolis, Illinois. That is a very large railway bridge that we built for the C. B. & Q. Railway across the river—

MR. MATHER:

Q. What was the date of the other bridge?

A. Thebes, I think I said about 1904, '03, or '04, somewhere along there.

The Metropolis bridge was ordered built of concrete the piers and all masonry work by Mr. Cartelege over our protest. We wanted to do with that as we did with all of our river bridges, use masonry piers. He said, "No, they must be concrete; this is the concrete age." Inspection of those piers last year shows very bad erosion on the piers. They will have to do something within the next five or ten years, possibly by adding a stone facing or something of that sort to protect them. There is concrete work on the approaches which they have already had to tear out and fix up at a pretty heavy expense.

In 1912 or '13 we built the Cherry Street bridge

in Toledo, Ohio. That is one of the famous ornamental concrete bridges, and it is quite a large structure. Recent inspections of that show that the piers are suffering badly at the water line, and there are other places, under some of the arch rings and on the approaches, where the concrete shows a marked depreciation. The city of Toledo have already arranged, I believe, for some repairs, extensive repairs.

All engineers are more or less familiar with the Nashville concrete bridge, which is giving trouble.

I examined one at Little Rock, Arkansas, within the past two years, which is not over, I don't believe, twelve or fifteen years old, that shows marked signs of depreciation.

We are all familiar, the Commission, and individual citizens of Harrisburg, with the terrible condition of the Mulberry Street viaduct.

I believe that anybody who would make a careful examination of the Cumberland Valley railroad bridge—

Q. At Harrisburg?

A. At Harrisburg. Across the river would see that it is in bad shape to say the least, and they will have to make extensive repairs to that some day in the matter of proper maintenance.

There are numerous examples all over the country. Most every one is familiar with the very clever work that they did to save the Princeton Stadium. Professor Beggs, a personal friend of mine, carried that out, did most of the work. I guess they spent nearly as much money trying to save it as it cost to build it. There are other stadiums in the country that are in the same condition.

Q. What the Commission may know about the Mulberry Street bridge will not appear upon this record, and I would like you to tell us a little bit more about the present condition of that bridge; about its age, and give us some idea of the cost of repair?

MR. MATHER:

If the Commission please, I think that is immaterial. Mr. Hull, himself, in the last record of this case, which I will offer in evidence, objected to any reference to the Mulberry Street bridge on the ground that it was a very different thing. Mr. Masters, of course, knows when the Mulberry Street bridge was constructed, and he knows the conditions surrounding it, but that is not material to this case.

THE COMMISSIONER:

I don't see where it benefits us here; the conditions are so different. They claim that the damage done there is entirely due to gas and the smoke.

MR. HULL:

That is just one of the things that I want to bring out; that is not the fact.

THE COMMISSIONER:

That would be entirely different from the conditions here.

MR. HULL:

That is not the fact.

THE COMMISSIONER:

Very well, go ahead.

MR. HULL:

Q. First, about how old is the structure?

A. I am not sure; I believe about 1912.

Q. And what is its present condition?

A. It is in very bad state of repair, and it is depreciating very rapidly.

Q. Do you know, what if any, estimates have been made as to the cost of its reconditioning?

A. I am a little embarrassed in this case. Mr. Hull, I have declined to serve for the City and for the two railroads in their cases before the Commission, as I don't care to become involved in the matter, and I would sooner not be asked to express an opinion as a matter of record.

Q. I don't understand that?

A. I am sorry. I am willing to say that it is in bad repair, and I will express my opinion as to what the trouble is, if you want that. That is, what caused the trouble.

Q. I want to ask you this particularly: Is the observable depreciation of that bridge, in that portion of the bridge which is not underlaid by railroad tracks—or does it extend the whole way across to the Hill section?

A. It is over the entire structure.

Q. And about half, or at least one third of the structure at the east end is not subject to the fumes from the locomotives at all, is it?

A. Not nearly as much so as that portion directly over the tracks.

Q. What in your judgment is the cause of that depreciation?

A. It is the fault that is inherent in nearly all reinforced concrete structures that is beginning to show in that structure; it may even be a little faulty design. Concrete as a material is used and useful only to carry compression stress, it will not carry bending movements or tension stresses. In the de-

velopment of the reinforced concrete design the principle is to put on the concrete to hold the steel in place; let the concrete take the compression, and let the steel take care of the tension and the bending. In the design of reinforced structures it is necessary frequently to get your steel quite close to the surface of the concrete in order to obtain the maximum efficiency of the steel work under those stresses. When the structure is subject to those stresses the concrete will crack; it becomes full of fine, almost microscopic cracks. Then too, your concrete is very porous; they frequently bush hammer the surface, giving a nice ornamental face and that removes the best part of the concrete, the densest coat, and makes it porous. That porous concrete absorbs moisture and carries the moisture to the steel, corroding the steel. There are some three or four types of iron oxide, and the bulk of the iron oxide depends on the type, but they all bulk, and much more so than water in freezing, so that in the course of time, when your steel has become coated with corrosion, it sets up an internal pressure in your concrete which will eventually, if your steel is close to the surface, crack the surface of the concrete so it is noticed by the eye quite easily. Concrete will frequently spawl and fall off, fall away from the steel, and this corrosion will continue. That is the great objection, the great factor in using reinforced concrete in exposed structures such as arch bridges. It is all right where it may be completely encased by stone or something of that kind, so that the elements cannot affect the material; it will last for a great many years, but where it is exposed it is subject to deterioration.

Then, of course, there is a great deal in the materials used; that has a great deal to do with it; whether it is full of lime; all sorts of ratios are used; water, mixtures, modulates, aggregates, are involved. In endless technical discussions that same conclusion has been arrived at, that concrete should be used discreetly until we know the answer.

Q. Were you present this morning when Mr. Jacobs testified that in his opinion any estimate that is made for depreciation to the respondent's property ought to be made on a straight line basis?

A. Yes.

Q. Do you concur in that?

A. I do, yes.

Q. I believe that you are familiar, not only with the physical hazards to which this property is subject, but also with the economic hazards. I want to ask you whether in your opinion a rate of return of seven per cent is a fair return to the owners of this property?

A. Well, it has always been my opinion that any bridge of this kind should pay a little better rate of return, not only on account of the physical hazards which are always occurring, but also on account of the change in earning power that may overcome it. The owners may be left with a considerable investment that won't have the earning power in later years that it has at the present time, that and the difficulty that we have had, and our experience today in financing ventures of this kind. There are quite a few of the bridges of this type that have failed, and there will be more failures within the next six months, due to changing conditions and

things of that kind. It has gotten to the point where it is almost impossible to proceed with this type of investment, that is, to get any financing for it.

Q. Mr. Masters, did you have any connection with the efforts of the respondent company here to finance the construction of this new bridge?

A. I certainly did.

Q. Attention has been called by counsel this morning to the fact that they were able to sell their bonds in 1929 at a premium. Was that the condition when they tried to build this new bridge?

A. No, indeed. I was very glad to get any money for it.

Q. How many underwriters were you able to secure that would make any offer at all for these bonds?

A. Well, I can briefly outline the steps that were taken. At that time Mr. Mojeska, my associate, had been called in by the Bear Mountain bridge as consultant, and I became acquainted with and was personally consulted by the people who undertook to finance and build the Bear Mountain bridge, and they were quite nervous over the matter. I submitted and talked to them about this, and they said, "No chance; we don't care for any more." That has since turned out to be quite successful. I then tried to interest, I suppose, a half dozen different investment and banking houses, that I was acquainted with. Personally I succeeded in getting Mr. Parsely, of Parsely Brothers and Company in Philadelphia to really seriously consider the matter. He decided that he might be willing to go into the thing if he could get an associate, and interested Battles

and Company in Philadelphia to be associated with him in the underwriting of this. They said they would look into the matter, and they started a most thorough and rigid investigation. Mr. Battles spent a great deal of his time here in Harrisburg, and a great deal of it cross examining myself to see that I had no personal financial interest or gain in this bridge, because he was so afraid that it would not be a good venture to put the money in.

Q. Of course, the bonds that were sold in 1929 were sold after a more or less successful history?

A. Yes, a seasoned security. Although I am surprised they were able to do it, because you could not put them through an investment house at that price, because I tried it.

Q. I believe that you did testify rather fully in the former hearing in testimony which I will hereafter offer for this record, as to the physical hazards to which this structure is subject?

A. Yes.

Q. I think we need not go over that ground again now. What in your opinion would be a fair rate of return for the owners of this property, to be used and useful in the public service?

A. I believe I expressed an opinion on that before. I think I said ten per cent; from eight to ten per cent.

THE COMMISSIONER:

Q. What was that answer?

A. I think I expressed an opinion on that in the former hearing; that from eight to ten per cent was necessary. That is a matter of record.

MR. HULL:

Q. Under the conditions as you know them now,

do you still feel that ten per cent would be a fair rate of return for this bridge?

A. I do.

MR. HULL:

You may cross examine.

Cross Examination

MR. MATHER:

Q. Mr. Masters, what did the company succeed in doing in regard to the preferred stock they sold? They sold it at par, did they not?

A. I don't know. If my memory serves me now I would say it was sold at a considerable reduction, or taken at a considerable reduction below par, but I am not familiar with that phase of it.

Q. Now these several bridges that you have mentioned were all built several years before the Clarks Ferry bridge as it now exists, were they not?

A. Yes, every one of them.

Q Would the conditions structurally on them, which you have described, apply also to the Clark's Ferry Bridge?

A It is the same general type of structure, especially in the roadway slabs, arch rings and things of that kind.

Q. Now, I think you said most of the fill used came from Steelton? Were you in the room when Mr. Johnson testified this morning?

A. Yes.

Q. As I recall he said that in his calculation on a unit cost he had assumed shipment by rail from Steelton?

A. Yes.

Q. The unit costs as they appear on the bid sheet which you offered as Respondent's Exhibit

No. 2, show a number of unit prices for fill. As I understand it they ran from $1.30 to $2.00, as a maximum, per cubic yard?

A. Yes, $1.30 to $2.00, that is right.

Q. Would you say that $1.50, such as the Vang Construction Company submitted, was a reasonable figure for fill coming from Steelton?

A. No, it was not. I had a great deal of trouble on that question to help them out from sustaining quite a loss. I even personally went so far as to take the matter up with the Pennsylvania Railroad and secured a special rate, which was filed with this Commission on short notice, in order to get the price down so that they could get the fill from Steelton, and I think they got a special rate, or tariff on that.

Q. And that could be done again if necessary, could it not?

A. I don't know.

Q. You have no reason to think it could not, if the contractor were to buy his stone as he did from Steelton?

A. We had to take up the whole business; take it up with the Commission here, the railroad company, and use every influence possible to get that rate reduced so he could get his stone and fill from there at a reasonable price.

Q. And from what you say then the McClean people from Baltimore and the Walter Rea people from Pittsburgh were even further in error?

A. Absolutely.

Q. The company from Richmond offered the same bid as the Vang people?

A. They all missed it on their fill, as theoretical-

ly the freight rate from Steelton at that time was $1.41 and we succeeded in getting a rate of $1.08 for that movement.

Q. Then you would say that every man who bid on this job made a blunder when it came to his price for fill?

A. I think he did, yes.

Q. Now, in regard to the removal of the piers. There was a credit for the sale of this lumber to the man who bought it and put up his saw mill and took care of it that way?

A. I am not familiar with that matter. It was taken out of my hands, and I did not succeed in getting a person to bid for taking down the old bridge and the piers. I think he gave them something for the lumber but what the credit was, and what it amounted to, I don't know.

MR. HULL:

I think the books show that.

THE WITNESS:

The books will reflect that. Mr. Duncan himself I think handled that.

MR. MATHER:

Q. That figure on the sheet here for the Vang Construction Company for item 10, $24.00. Is that the corrected figure that the estimator telegraphed you?

A. I would not like to say positively on that. He sent his wire in and then he was allowed to correct his bid on that ground.

Q. Is this the original bid or the revised bid?

A. This is the revised bid, after this amount had been added.

Q. This is the bid you paid by?

A. This is the bid we paid by. This is the same unit price that was reflected in the final estimate.

Q. And you paid in addition a bonus of approximately $22,000, because the company got it finished within the sixteen months period?

A. You probably have the figures before you, I don't. The bonus earned was $22,090.

Q. And sixteen months was the period?

A. I think sixteen months was the contract time, and every day he completed the work ahead of that contract time he was paid a certain bonus, and as I remember it he completed it about one hundred and forty days, or some odd days ahead of the contract.

Q. Was there a similar penalty, or any penalty if he did not complete it within that period?

A. There was. It was a bonus and penalty contract.

Q. The same amount for each day?

A. Absolutely.

MR. MATHER:

That is all, Mr. Masters.

NATHAN B. JACOBS, recalled.

Direct Examination

MR. HULL:

Q. Mr. Jacobs, I want to ask you what in your opinion from the studies which you have made of the Clark's Ferry bridge property, is a fair return to the owners for the value of the property which they are using in the public service?

A. Nine to ten per cent.

Q. And why do you entertain that opinion?

A. Principally based on my judgment as to what the speculative features are in this type of struc-

ture, or rather enterprise, as compared with a more conservative investment in utilities, such as water works, gas, electric or telephone. If seven per cent. is fair for a water company it seems to me that ten per cent. would be fair for a toll bridge. Further in financing it is customary to think of mortgage bonds for the major portion of the financing, probably fifty to sixty per cent., and in a speculative structure of this kind, this type of enterprise, the yield on the bonds prior to actual construction would probably be in the neighborhood of eight per cent., and the prospective income in earnings should be double the amount required for interest and amortization. So that in order to finance on that basis the earnings ought to be twice the interest and amortization requirements, which would make about sixteen per cent.—between fifteen and sixteen per cent., that would indicate that the return on the latter would have to be nine and six-tenths per cent., that is, taking it mathematically. So that taking both the speculative and the investment feature it would appear that the return should be from nine to ten per cent.

Q. It is the fact that this property is subject both to physical and economic hazards?

A. Yes.

Q. That other properties like water companies, for instance, are not subject to?

A. That they are not subject to in such a marked degree; they are not subject to the competition, which is the real economic hazard in this structure.

Cross Examination

MR. MATHER:

Q. Mr. Jacobs, as I understand you, you say that

this company ought to be allowed this extra rate of fair return, as well as be given a reserve for depreciation which is big enough to take into consideration in fixing that amount, the possibility of something happening to the bridge by way of changing conditions and its usefulness?

A. Yes, if they can earn it.

Q. In considering your figures were you aware of the fact that this company floated a bond issue of $450,000 secured by the structure, which cost them and the construction company approximately $525,000, plus such parts of the old bridge, some $50,000 more which were carried into the new structure?

A. Yes, I am also aware of the fact that those bonds were practically put out on an eight per cent. basis.

Q. They were sold to the public for what amount; on what basis?

A. I understand they yielded the company about 87.

Q. I didn't ask you that?

A. I don't know what the public paid; what it cost the company.

MR. MATHER:

That is all.

MR. HULL:

If the Commission please that is all we are prepared to present at this time.

THE COMMISSIONER:

Have you anything else?

MR. MATHER:

I would like to recall Mr. Keane for the purpose

of giving Mr. Hull some information that he asked for.

J. E. KEANE, recalled.

Direct Examination

MR. MATHER:

Q. I show you a paper marked Complainant's Exhibit No. 2 and ask you what that is?

A. It is a copy of the final estimate of Mr. Frank M. Masters which I made while examining the books and records of the Clark's Ferry Bridge Company.

Q. That is a copy of the paper which you obtained from the Company?

A. Yes.

MR. MATHER:

I offer that in evidence.

THE COMMISSIONER:

Admitted.

Cross Examination

MR. HULL:

Q. Mr. Keane, I asked you this morning whether you could obtain certain information not shown on your report. Have you obtained that information?

A. I have.

Q. Will you give it to us, please?

A. The premium which the company paid on the retirement or redemption of the bonds, I might state as follows: There were $15,000 worth of bonds at 102, which made a premium of $300; $75,000 at 103, or a premium of $2250; $340,000 at 103½ or a premium of $11,900, making a total of $14,450.

Q. You say $4,000?

A. $14,450. Against this debit the account should show a credit for premium for the sale of the new bonds, the debits and credits both went in this one account which the company entitled "Premium Account."

Q. What was the amount of the credit?

A. That was $6,687.50.

Q. And the net premium gives what?

A. $7,762.50.

MR. HULL:

Thank you. That is all.

THE COMMISSIONER:

Continued for further hearing?

MR. HULL:

Yes, your Honor.

THIRD HEARING

Stenographic report of hearing held in the Public Service Commission Building at Harrisburg, Pennsylvania, Tuesday, December 30, 1930.

COMMISSIONER BROWN, PRESIDING

(Same appearances as at first hearing)

MR. HULL:

Do we proceed?

THE COMMISSIONER:

Yes.

FRANK M. MASTERS recalled.

Direct Examination

MR. HULL:

Q. Mr. Masters, the American Appraisal Com-

pany, in the appraisal they made of the respondent company, offered in evidence here, and identified as Respondent's Exhibit No. 1, allowed $58,090, as the cost of financing this bridge property, their direct construction cost, that is, the actual cost of the tangible property being $718,000, giving the total reproduction cost of $891,000. I want to ask you whether or not in your opinion $58,090 is a reasonable estimate of the cost of financing a bridge at this site?

MR. MATHER:

Before the witness answers that question, I would like to ask if Mr. Masters is offered as an expert on financing, or simply as an individual.

MR. HULL:

He is offered as a man of considerable experience, and he testified on this subject before.

THE COMMISSIONER:

Yes, I think he did.

MR. HULL:

And following this I am going into his knowledge of financing costs.

THE COMMISSIONER:

You may proceed.

THE WITNESS:

Based on an appraisal of $700,000, the total cost of financing given is $58,000.

MR. HULL:

Q. $718,000 is the tangible cost?

A. And the $58,000 is the figure used for the cost of financing.

Q. And the total reproduction cost, including tangibles and intangibles is $891,000?

A. Yes, and this is whether or not the bridge, as of the date of that appraisal, 1929—

Q. September 1, 1929?

A. It could be financed for that figure as a privately owned toll bridge?

Q. Yes.

A. Well, I would say that is a very reasonable figure, based on the experiences we have had since that time. In fact it is impossible, as of that date, or it was almost impossible to do any financing of privately owned toll bridges, and the rates for the financing became prohibitive, so that many projects are held up, and are still in abeyance. Our books are full of them.

Q. By that, do you mean that you have personal knowledge, having designed a number of bridges, that could not be privately financed at that time?

A. Yes, I have quite a number of them.

Q. Now, Mr. Masters, will you just tell about, enumerate some bridge projects with the financing of which you have been familiar during the past few years?

A. Well, we financed, I was instrumental in helping to finance, on traffic surveys and cost estimates and studies, the Tacony-Palmyra Bridge, a privately owned bridge over the Delaware River outside of Philadelphia—which by the way has been very successful—and the financing cost of that was all of 10%. There the cost was represented by actual cash paid in. There have been a number of others that we have been connected with, that we have been trying to finance, and due to the failures of quite a number of privately owned toll bridges, the market for this type of security has just about disappeared. For instance, the Detroit International Bridge, for which we have been consulting engineers for the

bankers, has been a failure, due to competition of one kind and another. Their bonds today, the debentures, I think are sold at $4, and the first mortgage bonds at about $23. The thing came about, the trouble with the private financing started with the Pontchartrain Bridge in Louisiana, a bridge in which the private investment bankers had spent many millions of dollars, and it had just started into operation when the State of Louisiana came along and built free bridges alongside and parallel, and it destroyed their investment, and all of those bonds were worthless in the hands of the public. That was followed by quite a number of others which could be mentioned, such as the Cape Girardeau, Mississippi River Bridge, Cairo Bridge, the Paducah Bridge, the Madison Bridge, and a number of others. In the meantime the Detroit International was put in here, and I think it represents an investment of $20,000,000, and without going into great detail, a great many of them are defaulting on their bonds, so that there is no market of any kind for private investments in bridges at this time. We have on our books, have so many ventures that have been well advanced, right up to the point of financing, but the bond market has been bad, everybody knows that, and you could not get anybody to put money into these things, and they are just standing still.

Q. A moment ago you said there was practically no market for bonds at this time. Now, could I direct your particular attention to the date, September 1, 1929, as of which date this appraisal was made. Did the conditions that you refer to obtain at that time?

A. Yes, prior to that time it happened.

Q. Mr. Masters, have you any knowledge of the proposed construction of the bridge across the Susquehanna at Millersburg?

A. We have been retained as engineers, I think by the Susquehanna Utilities Company or Corporation, I would have to look up my records to get that name exactly correct—to design for them a bridge on top of a power dam to be built across the Susquehanna River at Millersburg. When they retained us almost a year ago they were very anxious to proceed with the work at once, but they found the financial market in such shape that we could not raise money for the venture, and it has been lying quiet ever since; we have heard nothing from it.

Q. In cross examination of one of the respondent's witnesses, with respect to the cost of certain materials going into this bridge, reference was made by counsel for the Commission to unit costs for some similar materials on the Columbia-Wrightsville Bridge. Is it a fair comparison to compare unit costs on that bridge with unit costs on this bridge, Mr. Masters?

A. It depends on the items you are comparing, Mr. Hull.

Q. Well, take reinforced steel, for example?

A. No, I would not think it would be, on account of the fact that the reinforced steel in the Columbia-Wrightsville Bridge, the greater tonnage of this work, which is a very large item, compares with this bridge. That is a plain bar rolled in standard lengths in the arch rings that requires no bending or work in the field, and the labor of handling this material as it comes from the mill is very small. It is cut to lengths at the mill and is taken

out there and put into place very simply.

Q. Mr. Masters, in a former proceeding before this Commission, you testified that it would cost the Clark's Ferry Bridge Company approximately $21,950 to remove from the bed of the Susquehanna River the piers of the old bridge, and the Commission in its finding at that time allowed that amount for that purpose. It appears at this time, or rather up to this time, the company has spent only $4,786 in that work. I ask you whether or not that work has been completed?

A. No, sir.

Q. As the piers now stand, state whether or not they are a hazard to the present bridge company?

A. Yes, they are.

Q. And is there any public body having jurisdiction to require the company to remove them if they don't do it voluntarily?

A. When we secured permission from the State Department of Forests and Waters, I think it was Mr. Rider, the engineer in charge, insisted that these old piers must be removed to a point, I believe it was 4 feet below the water level, now, I am quoting from memory on that, I would have to look into it carefully, and when we made the appraisal of the cost of removing the piers in accordance with the requirements of the department, we actually inquired of the river men working up there what it would cost to dismantle those piers, load the stone on barges, or otherwise get them out of the river, to meet these requirements, and taking the price that they were willing to do it at, and multiplying by the number of units we knew would have to be removed, in that way we reached the figure of $21,-

000. The owners, however, never saw fit to comply with that requirement, they simply shook the top loose. Now, the stone are in the river. I suppose some have rolled down the river, and there is a good deal of the piers standing there which may cause an ice gorge or dam, then the department would insist that they be removed.

Q. In your opinion, is that an item of cost or a liability that the company must meet?

A. Well, it certainly ought to be set up on the books as a liability, because the department can enforce their order any time at all, they have full control.

Q. And will the cost of removing what now remains of the piers be approximately the difference between your original estimate and the amount already expended?

A. I should think it would, because I don't know how much of them have slipped down the river up to this time. I should think approximately that figure, if they require them to be removed to the elevation they had fixed originally.

MR. HULL:

You may cross examine.

Cross Examination

MR. MATHER:

Q. Mr. Masters, do you remember what you testified in the prior case would be the proper figure for financing?

A. No, I don't.

MR. HULL:

I don't think he testified or gave any opinion. The record shows he did testify what the actual cost was.

MR. MATHER:

Q. When you say you think $58,000 would be a reasonable figure for that account, for that purpose, would you say that would probably be what it cost back in 1925?

A. Well—

Q. In other words, are conditions the same now as they were then?

A. The conditions as of this date are somewhat changed. It has become practically impossible to finance any toll bridge as a private venture. They have developed a new type of financing, known as the revenue bonding plan, in which the states and the municipalities and the cities are financing these projects with a revenue bond in the name of the state. The last piece of that kind of financing was the State of Kentucky financing $7,000,000 of revenue bonds, which they sold to the bankers at 90.

Q. Mr. Masters, don't let us go off into Kentucky.

A. Well, this is a financial question, and I am just trying to show you what the facts are today. That is a state bond that they have to sell at 90, and they could not do anything with private interests backed out of the state, they would not do anything.

Q. What would you say would be a reasonable cost of financing this structure under conditions as they existed in 1925?

A. 1925?

Q. Yes.

MR. HULL:

If the Commission please, that I think is going pretty far afield. We are dealing now with conditions as of December 1, 1929.

THE COMMISSIONER:

What is the purpose?

MR. MATHER:

I want to compare this witness's opinions with the actual facts. The records in the prior case show what it cost to do this thing in 1925, and I want to know how Mr. Master's estimate would compare with that.

THE COMMISSIONER:

Go ahead.

MR. HULL:

But then, we submit, that it is only fair to the witness to advise the witness, refresh his recollection of what the actual costs of financing were at this time.

MR. MATHER:

Not at all. He claims to be competent to state what it would cost to finance this thing today.

THE COMMISSIONER:

I think the witness is able to take care of himself.

THE WITNESS:

Do you want it in dollars and cents?

MR. MATHER:

Q. I think we can leave out the cents.

A. I was very instrumental in selling these bonds.

Q. I know you were.

A. I felt at the time we were selling at a very reasonable price, that the bridge company had made an excellent deal. This bridge was the second bridge of any size after the Bear Mountain Bridge, on which financing cost more, because we looked into it at the time, and when we got a price for these

bonds better than the Bear Mountain Bridge, I felt they were getting all they could. I believe these bonds were sold at 87 to bankers, and put on the market at 94, and that was a very fair rate.

Q. Mr. Masters, the Bear Mountain Bridge that you refer to, had there ever been a bridge there before this Bear Mountain Bridge was built?

A. No, sir.

Q. And the roads had never led directly to that point of the river as a point of crossing, as a ferry or otherwise?

A. Yes.

Q. Had there been a ferry there?

A. Yes.

Q. For how long?

A. Well, they had to buy out the rights in land there some time prior to 1700.

Q. But there never had been a bridge there?

A. There never was a bridge there, but it is the logical location for a bridge.

Q. Now, the Tacony-Palmyra Bridge that you refer to, that is over the Delaware near Philadelphia?

A. Yes.

Q. And there was also a publicly owned toll bridge over the Delaware in Philadelphia?

A. In Philadelphia, the Philadelphia-Camden Bridge, yes.

Q. And it is generally understood that when the tolls on that bridge have been sufficient, that that bridge will become a free bridge, is it not?

A. That is a matter of financial expediency. At the present time they are figuring on re-financing it, but those matters are confidential, and I don't like to answer on them when we are connected with it.

Q. Would you say that those two bridges are competitive?

A. They are to a certain extent.

Q. There never had been a bridge at the Tacony-Palmyra site before this particular bridge that you speak of was built, was there?

A. There was a very congested ferry that was not adequate.

Q. Now, these various bridges that you have mentioned over the Mississippi River, have there ever been bridges at those sites before the bridge that you have in mind, with the financing of which you have knowledge?

A. Well, I don't know whether I mentioned the Louisville—I didn't mention that. I don't believe there were, there were ferries at all of them.

Q. Now, in regard to the piers in the river, I think you intimated there was some possibility that due to the fact that some of the stone might have washed down the river past the bridge, the removal of the piers might be somewhat less than the previously estimated cost?

A. I didn't say that the cost of removing would be less, because I think it would cost more to take them out in the present condition than it would if they had been left to take them off as these men had figured on doing.

Q. But some of the stone is gone, the quantity is less?

A. The quantity is less, but the cost might be higher. I would not want to say without making a careful examination.

Q. In other words, the conditions are about the same?

A. Yes.

MR. MATHER:

That is all I have from Mr. Masters.

MR. HULL:

That is all, Mr. Masters.

P. F. DUNCAN, a witness called in behalf of the respondent being duly sworn was examined and testified as follows on

Direct Examination

MR. HULL:

Q. Your name is P. F. Duncan?

A. Yes.

Q. Where do you live, Mr. Duncan?

A. Duncannon.

Q. And your business?

A. President of the Duncannon National Bank.

Q. Are you connected with the Clark's Ferry Bridge Company?

A. As treasurer.

Q. How long have you lived in or about Duncannon, Mr. Duncan?

A. About 70 years.

Q. Are you familiar with the value of real estate in and about the property of the Clarks Ferry Bridge Company?

A. I am.

Q. The American Appraisal Company in the appraisal offered in this case have appraised the real estate of the bridge company, including the lands owned on the south approach, the lands on the north approach and the land on which the bridge office stands at $11,350. Is that a fair market value of

that land today?

A. It is a very conservative valuation.

Q. By conservative do you mean low?

A. I mean it is low. I think it would sell for more money.

Q. Mr. Duncan, at the present time how many regular toll-keepers are employed by the bridge company?

A. Six.

Q. And what are they paid?

A. $100 each, except one. He is paid $83.20.

Q. $83.20?

A. Five are paid $1,200 a year, and one is paid $1,000 a year.

Q. So that makes a total for the six of $7,000 a year?

A. Yes.

Q. Now, in addition to those six regular toll-keepers, do you employ an extra man at any time?

A. We do, to look after the bridge constantly.

Q. I mean as a toll-keeper?

A. Oh, yes. We do on busy days, on Sundays and holidays we employ an extra man.

Q. What do you pay that extra man?

A. $4.17 a day.

Q. Can you give us an approximate estimate, Mr. Duncan, of the number of days a year that you employ that extra man?

A. About 50.

Q. About 50 days. Who are the present officers of the bridge company?

A. Christian W. Lynch, President; Mrs. Jennings, vice president; J. Y. Wills, secretary, and P. F. Duncan, treasurer.

Q. What salaries are paid to these four officers?
A. $6,000 a year, and the officers, $4,800.
Q. The officers are paid $100 a month each?
A. Yes, each.
Q. And what are you paid as treasurer in addition for the bookkeeping?
A. $1,200 a year.
Q. $1,200 in addition?
A. To keep the accounts and handle the monies.
Q. Does the company today have the same amount of common stock which it had in 1925?
A. Yes.
Q. And the same amount of preferred stock outstanding?
A. Yes.
Q. You have re-financed your bonds?
A. Yes.
Q. And I read to you this morning a statement from pages 161 and 162 of the record of Mr. Keene, as to the cost of that re-financing. Those costs you found to be correct?
A. Correct.

MR. MATHER:

Pardon me, Mr. Hull. What are those pages?

MR. HULL:

Pages 161 and 162.

MR. MATHER:

Of what record?

MR. HULL:

The record in this case. The last thing at the last hearing.

MR. HULL:

Q. Did the company recently file a new tariff of rates?

A. They did.

Q. They became effective on one day's notice, I think?

A. The 14th of November, I believe it was.

Q. Mr. Duncan, have you made an estimate of the effect of that new tariff upon the annual revenues of the company?

A. Based on 1929, trucks, it made a difference of $4,411.

Q. It would reduce the revenue that much?

A. Yes.

MR. MATHER:

Q. Per year or month?

A. For the year.

MR. HULL:

No, that is the annual reduction.

MR. HULL:

Q. The new tariff reduces the rates on trucks and buses, does it?

A. Yes, trucks and buses only.

Q. In addition to the officers and employees to whom you have already referred, do you employ a superintendent?

A. We do.

Q. What do you pay him?

A. $900 a year.

Q. And what are his duties for the company, Mr. Duncan?

A. To see that the bridge is kept clean, and look after things generally around the bridge, make minor repairs, look after the lights, the lighting of the bridge.

Q. Does he have supervision over the toll-keepers?

A. No, he does not.

Q. Who supervises the property itself?

A. The property itself?

Q. Do you have a clerk employed in the bridge company office?

A. Yes, we have a woman who looks after the—receives the money from the collectors.

Q. And what is the salary of the superintendent?

A. The superintendent, $900 a year.

Q. The salary of this clerk?

A. $900 and house rent.

Q. Does she live in the house that you own?

A. She lives in the house, yes.

MR. HULL:

You may cross examine.

Cross Examination

MR. MATHER:

Q. Mr. Duncan, just explain what you pay the $900 per year for; for just looking after the bridge itself, the structure?

A. Yes, the structure, the property, the approaches, and when we have ice, he puts ashes on the bridge; sweeps the bridge once a week.

Q. Sees that the snow is off too, I suppose?

A. Sees that the snow is off.

Q. And the woman clerk gets $900 a year plus the rent of the house?

A. Yes.

Q. Does she put very much time on this work?

A. Oh, yes, 8 in the morning till 11.30 at night.

Q. How about the superintendent, is that a full time job?

A. Yes, full time job, yes.

Q. Who is this woman clerk?

A. Mrs. Nichan.

Q. Is she related to the superintendent?

A. No, in no way. The superintendent is a bachelor.

Q. What is the house that she occupies? Is it the same house, the same building, that is the company's office?

A. Yes, it is.

Q. The house which this woman occupies is the property which the American Appraisal Company has put in the record at the amount of $8,100?

A. Yes.

Q. And who is in charge of the toll-keepers, the toll collectors?

A. I am.

Q. They report to you?

A. Yes.

Q. And you as treasurer get a total salary of $2,400.

A. Yes.

Q. Now, will you tell us just what your duties are?

A. I do all the bookkeeping, pay all the bills, and keep all the accounts of the bridge.

Q. To whom do you report?

A. To the directors.

Q. And what do the other three officers do?

A. Well, they give it executive supervision.

Q. Do they do anything at all except act at Directors Meetings?

A. Well, yes, they do.

Q. The four officers are also stockholders in this company, are they not?

A. Yes.

Q. The four of them own all the stock, do they not?

A. They do, I guess.

Q. Who did you say was your president?

A. Christian W. Lynch.

Q. Before the death of Mr. Jennings, he was president—Mr. Jennings was president, was he not?

A. Yes.

Q. Did Mr. Lynch's salary change when he became president?

A. No.

Q. Mrs. Jennings now receives the same salary that her husband had received as president?

A. The same salary.

Q. Are Mr. Lynch's duties changed in any way by reason of his becoming president instead of vice president?

A. Very little.

Q. I think you said that you estimated that the recent reduction in the truck rates would be a reduction of about $4,400 a year?

A. Yes.

Q. Did that tariff lower the rates also for the buses?

A. Buses and trucks both.

Q. Does the $4,400 include trucks?

A. Trucks and buses.

Q. That $4,400 covers both?

A. Yes.

MR. MATHER:

That is all, sir.

MR. HULL:

That is all, Mr. Duncan.

WILFRED JUPENLAZ, a witness called in behalf of the respondent being duly sworn was examined and testified on

Direct Examination

MR. HULL:

Q. Your name is Wilfred Jupenlaz?

A. Yes.

Q. Where do you reside?

A. I live in Pittsburgh.

Q. How old are you?

A. 32.

Q. By whom are you now employed?

A. By Morris Knowles, Inc., engineers.

Q. And what is your profession?

A. I am a civil engineer.

Q. Are you associated with any professional societies?

A. Yes, I am an associate member of the American Society of Civil Engineers.

Q. A graduate of what institution?

A. Pennsylvania State College.

Q. In what year?

A. 1921; January, 1921.

Q. Since, or immediately after your graduation, where were you employed?

A. By the Pennsylvania Department of Highways, for two years, on highway location surveys, as chief of party.

Q. Subsequent to 1922, where have you been employed?

A. I have been employed by Morris Knowles, Inc., during the past eight years, working on various investigations and municipal engineering, particularly for those types of cities affected by city

planning problems; including among other things, traffic investigations, traffic surveys and estimates of future growth in traffic and population for a number of cities.

Q. The preparation of city plans and the planning of highway routes through cities?

A. Yes, that is one of the principal features of the city planning work we do,—to develop a system of main thoroughfares. That system is based upon as close estimates as can be made of the future traffic needs of the city.

Q. What particular traffic studies have you been engaged in?

A. We have prepared traffic studies for High Point, North Carolina; Canton, Ohio; New Castle, Pa. The New Castle study had to do particularly with determining the most suitable location for proposed highway bridges, from the traffic standpoint. At the present time we are engaged on traffic investigations for the city of Williamsport. We have also made a study in connection with certain proposed street widenings in the city of Pittsburgh, the investigation being for the purpose of determining whether the probable future growth in traffic would justify the expenditure which would be required.

Q. Did you make any study in Williamsport, Pennsylvania?

A. We are engaged on that study at the present time; that is, we carried out traffic counts and are analyzing them now.

Q. Bradford, Pennsylvania?

A. In Bradford, Pennsylvania, we developed the city's plan of main thoroughfares, based upon the present and probable future traffic on existing and

proposed streets of the city.

Q. Did you make a study of the traffic, history and conditions relating to the Clarks Ferry Bridge?

A. Yes, we made rather a complete investigation to determine what the probable traffic will be over the Clarks Ferry Bridge during the next five years; that is, for each year from 1930 to 1935, inclusive.

Q. In that study were you the man in charge?

A. I was the man in charge.

Q. Did you have any engineers engaged in assisting you?

A. I had an assistant engineer from our office who worked with me and under my direction, and we also employed a number of local men who did the actual counting of traffic under our supervision. Both myself and my assistant supervised the local men by traveling continually from one station to the other, where they were located during the day.

Q. Who was your assistant engineer?

A. Mr. James Allen.

Q. Is he a graduate civil engineer?

A. He is a graduate civil engineer.

Q. Of what institution?

A. I don't remember.

Q. Now, have you prepared a report resulting from your studies of the Clarks Ferry Bridge?

A. Yes, we have prepared such a report.

Q. Will you produce it, and let me have your additional copies?

(Witness producing exhibit.)

(Report of survey of traffic over the Clarks Ferry Bridge, March, 1930, produced and marked Respondent's Exhibit No. 3, 12-30-30.)

MR. HULL:

Q. You have produced a report, identified as Respondent's Exhibit No. 3, is that your report, the report of your traffic study.

A. That is the report of our traffic study.

Q. Now, Mr. Jupenlaz, will you take that report and explain to us first the data on which your analyses are based and the method of proceeding with your study?

A. We first considered that we would base the study upon all the records obtainable in regard to possible traffic over the bridge; that we would make some counts in the field to determine where the traffic comes from that uses the bridge, and where it goes to; and we would then, on the basis of past records and the present origin and destination of traffic using the bridge, estimate the probable future increase in traffic over the Clarks Ferry Bridge, using such reasonable indices for future traffic curves as could be obtained, such as increases in registration of automobiles, increased use of the highways by people owning automobiles, and so on.

We have included in the report a table which is marked table No. 1, showing the traffic over the bridge for each year from 1925 to 1929, inclusive. This table has been made up by taking the records of the bridge company, which show each car passing over the bridge each day which pays toll; and we have also made an allowance for the cars using the bridge which operate under monthly passes. We have made an allowance of approximately 60 trips per month for cars operating on monthly passes. That is a small proportion of the total, so that the final result is affected but very little by traffic oper-

ating on monthly passes, being in the neighborhood of 5% of the total. We have plotted this record of past traffic over the bridge, on a plate which is found on page 34 in the report, and is marked plate IV.

Q. Plate VI, is it not?

A. Plate VI, yes; showing in graphic form the traffic from 1925 to 1929. Those figures were determined, and used as a starting point for our future estimates, our estimates of future traffic. In order to determine, however, what rate of increase the traffic might be expected to show, we considered it necessary to determine the origin and destination of traffic using the bridge. To do that we stationed two observers on the bridge on March 4, 1930, from 6 o'clock in the morning till 6 at night. These observers questioned each driver as his toll was collected, inquiring where his trip had originated and where he was going to. We summarized all that information in the office and divided the traffic into different portions, so that we could tell what portion of the total traffic originated for example in Harrisburg, and was bound in the direction of Williamsport; what percentage represented the interchange between Harrisburg and points west on the William Penn Highway, and so on.

Just to illustrate the results of that count, I would like to refer to a table which is marked table 2, shown on page 15. For the purpose of the analysis we divided the points of origin into different groups. For example, in the first column the first item is marked, "Between Mecks Corner and Clarks Ferry Bridge via Duncannon." That represents that traffic which either originated at or was bound for points between Mecks Corner and the Clarks Ferry

Bridge by way of Duncannon. That is made up, of course, largely of Duncannon traffic. The interchange, for example, between that section and Harrisburg on this particular day amounted to 110 vehicles. That is shown in line (a) "Count of March 4th, 1930." The interchange of traffic between that area around Duncannon, and points east of Harrisburg, amounted to three vehicles per day, the three being shown in the fifth column. That will illustrate the procedure that was followed in the dividing of this traffic as to origin and destination.

Q. With respect to that exhibit, Mr. Jupenlaz, the division of traffic shown in the first column on the left hand side of the table here arose on the west side of the river, did it not?

A. Yes, generally.

Q. And these vertical columns to the right are points east of the river?

A. Yes, that generally is the point of division. This table, it will also be noted, shows local traffic only. We were interested in determining what proportion of the total traffic across the bridge originated close by, and what portion is through, or tourist traffic. We made an arbitrary division for the purpose of convenience, classifying as local traffic all traffic which originated or was bound to some point within 50 miles of the bridge by improved highway. Traffic which both originated more than 50 miles from the bridge and was bound to some point more than 50 miles from the bridge was classified as through traffic, and the through traffic is shown on table 3, page 16. The interchange there is shown according to the same scheme as on table 2.

For example, the interchange between Route No.

11, or the Susquehanna Trail, and points 50 miles or more south and southwest of Clarks Ferry Bridge on the west side of the river was 83 vehicles. For points 50 miles or more by highway east and southeast of the bridge, east of the Susquehanna River, the interchange was 51 vehicles. With that information tabulated it was possible to know just what points will have the greatest weight in determining the probable future increase in traffic over the bridge; whether Harrisburg is the determining factor in traffic over the bridge, or whether the future growth of Harrisburg is the determining factor; or whether points farther away.

We were interested, too, in determining traffic to points along main highways leading toward the bridge. We made what is known as a cordon count, counting traffic at Millerstown on the William Penn Highway, at Millersburg on Route 209, on the west shore route just south of Duncannon, and at several other points. Summaries of the results of those counts are shown on tables 4, 5, 6, 7, 8, 9, 10, and also table 11.

Q. In that connection, are the points where these several counts were taken shown on your plate on page 29?

A. Yes, we have shown there the location of the traffic count stations, on main highways leading toward the bridge. Those points were taken, or picked out wherever possible, to coincide with stations used by the Pennsylvania Department of Highways in joint traffic surveys with the United States Bureau of Public Roads in 1924; so that we were able to compare the present traffic on those highways with estimates which had previously been

made by the State Department.

Q. And, Mr. Jupenlaz, will you identify on plate 1, the point or station which is referred to in your report as Mt. Patrick?

A. Yes, Mt. Patrick is a station marked on the exhibit as "State 1651, M. K. Inc., D"; Mr. Patrick being the small village or hamlet on the west side of the Susquehanna River almost opposite Millersburg.

Q. Will you identify the point referred to in your report as Kinkora Heights?

A. Kinkora Heights is the term used locally, I understand, to mean the bluff along the river bank about a mile south of Duncannon, on the west side of the river. It is shown here as "State 1123," just south of Duncannon.

Now, the next step in the study, after classifying the traffic as to origin and destination, and obtaining the information as to the traffic on the surrounding roads, was to determine what the effect was in 1929 of road construction on the west side of the river between Perdix and Coveallen. As soon as the concrete road construction was started in that year, the effect of that construction was noticeable in the traffic across the bridge. It will be noted on the plate showing the traffic graphically, Plate VI, that the point for 1929 appears somewhat higher than the curve through the previous points, and that '28 is somewhat lower. The 1928 figure is probably below normal on account of highway construction north of the Harrisburg City Line. That project was started on April 16, 1928, and finished on October 12, 1928. Although traffic was maintained, the work did obstruct traffic which normally would use

the bridge, to some extent. Further than that, the road from Perdix to Coveallen was being improved during all the first nine months, practically, of 1929; and it was finished on September 14, 1929. That road, although open to local traffic to some extent, was closed to through traffic—a sign was placed detouring through traffic—and we have estimated what the effect of that construction was during 1929 in diverting traffic across the bridge. Traffic generally on the west side of the river found it more convenient to use the Clarks Ferry Bridge than to go past the construction operations.

Q. Now, in making your estimate of the influence of that construction, you based that upon the count that you had made as to the traffic on Route 5 across the river?

A. Yes.

Q. And of course, you didn't consider that that construction influenced any through traffic at all, except that?

A. No, that is true. We made an estimate of the effect of that construction by making our count of traffic on Route 5 just south of Duncannon, and adjusting our count to an annual daily average by allowing for the day of the week, for the period of the day during which the count was taken and for the time of the year. From that calculation we obtained a figure which represented the probable annual traffic over the road just south of Duncannon during the year 1929; or what that traffic normally would have been if there had been no road construction operations under way. We then used, what in our judgment was a reasonable allowance for the amount of traffic which used the Clarks Ferry Bridge

in preference to the west side of the river; and we estimated that probably in the neighborhood of 30% of the traffic, which would have used the west shore road, came across the Clarks Ferry Bridge. That figure then was applied to the curve shown on plate VI, page 34, and is the point amounting to something over one million cars, the point through which the curve passes on the plate. That we have called, in the report, the normal 1929 traffic.

Q. That is the dotted line between '27 and '29, is it not?

A. That is correct. The reasonableness of our computation on the effect of the road construction on the west side of the river is indicated by the curve itself. You will notice that the curve extends upward and follows the observed at years '25, '26 and '27 very closely, so that the dotted curve really represents the normal traffic conditions during the years '27, '28 and '29. We arrived then at a total figure for 1929 traffic across the bridge, amounting to 1,008,427 vehicles as the normal 1929 traffic. That is a reduction of approximately 90,000 cars.

That figure, 1,008,427 has been distributed according to origin and destination on tables 2 and 3. Turning to table 2, the figure 19 in the third column, indicates the total interchange of traffic between the two points that are marked, "Between Mecks Corner and Clarks Ferry Bridge via Duncannon," and "Between Clarks Ferry Bridge and Harrisburg." That figure 19 has been extended to 13,600, which is the probable proportion of 1929 traffic. 13,600 represents then the probable 1929 traffic between the two points that are marked on the table.

The next step in the study was to estimate how

much each of these items was likely to increase during the next five years. We have made a study of the growth of population in areas tributary to the bridge; the growth in automobile registration and the probable future increase in traffic. For convenience we divided the area around the bridge into a number of sections. In this area, shown on plate V, you will notice that they are lettered from B to N, inclusive. Sections E, G, I, K, M, B, are all within 50 miles of the Clarks Ferry Bridge. The other sections are within 100 miles of the bridge. We made an estimate of the 1929 population and the 1935 population, for each of the areas that are shown on this plate V.

We also made an estimate of the 1929 and 1935 automobile registrations in these areas, and to do that we employed the factors which had been employed by the Pennsylvania Department of Highways in connection with traffic surveys that they have carried on to predict the probable future traffic in 1935. For example, the Department of Highways in instructions sent out to their Division Engineers, have given them factors which represent the number of automobiles per thousand persons in each county of the state. Along with these factors for 1929 they also furnished factors for 1935, and have utilized them in estimating the probable future increase.

We have taken the factors for the several counties and applied them to the different sections that are shown on plate V, including the counties which are included in the sections marked on the plate. The results of that study, the probable future increase in population and automobile registration,

are shown on a table; table 13 on page 26. You will notice that for each section which is laid out, A to N, inclusive, the second column gives the population in 1910, the next column the population in 1920, and the next two the estimated populations in 1929 and 1935. The next two columns, which are headed "Estimated motor vehicles per 1000 population," show the factors which I have referred to, factors which originate from the estimates made by the Pennsylvania Department of Highways. The next two columns give the estimated registration,—automobile registration,—in both 1929 and 1935; and the next to the last column gives the final result which is the estimated increase in automobile registration. This estimated increase ranges from about 7% during that period up to 41%. It will be noted that in some sections, even in spite of a population decrease, it is estimated that the number of automobiles will increase.

The estimated increase for the whole area affected is shown in the table as 32%. The State of Pennsylvania, in studies made by the Highway Department, estimated an increase of 30% for Pennsylvania in automobile registration from 1929 to 1935, so that our estimate for the area being considered presumed a slightly faster growth than was used by the Highway Department for the whole state. There is one point in connection with the table, the studies were made before the results of the 1930 census were available. Those results are available now, and we have compared the rate, the actual rate of increase between 1920 and 1930 as shown by the recent census figures, with the rates produced in our estimates, and we find that in general the rate of growth of

Harrisburg and the surrounding territory in Pennsylvania actually has been somewhat lower than the rate used in our computation. We allowed a uniform straight line arithmetical increase from 1910 right straight through to 1935, but the actual growth as revealed by the last census is somewhat lower, so that the estimates of increase in automobile registration as shown in the next to last column in table 13 are probably somewhat liberal.

Turning back to table 2 it will be noted that the estimates which are marked "(b)," the probable annual 1929 traffic have been extended to give the probable 1935 traffic. Our percentages were obtained, as I just explained, from the probable future increase in automobile registrations. Traffic between "Mecks Corner and Clarks Ferry Bridge via Duncannon," and Harrisburg and vicinity has been increased 30%. That figure is shown in the fourth column. The whole result for this item is the count showing 110 cars, which, allowing a probable proportion of the total for 1929 traffic, gave an interchange of traffic between these two points of about 78,900 cars. That traffic was increased 30% to give 102,600 cars as the probable interchange between these two points in 1935.

These tables show what may be expected to occur if the factors which direct traffic toward the bridge, or away from the bridge, remain as they are now until 1935. We have also made a study of what the effect of certain highway improvements, which have been proposed, would be on these 1935 estimates. I might mention that the final results for 1935 are shown in tabular form on page 27, in the last column, and the first line, with existing highways unchanged.

The estimated traffic in 1935 is 1,292,100, and points in between 1930 and 1935 have been interpolated from the curve which is shown on plate VI.

There was another factor, before considering the effect of the improvement of certain highways leading to the bridge, which was considered and should be mentioned, although the net effect was not great in the final results, and that was the probable increased use of the road from Newport south to Carlisle and Gettysburg. That route gives certain advantages to traffic originating, for example, in the vicinity of Carlisle or Gettysburg and bound for points west on the William Penn Highway, such as Lewistown, Bellefonte or Altoona. We have found from our study of the origin and destination of traffic crossing the bridge, and of traffic on highways leading to the bridge, that at the present time approximately three quarters of the interchange of traffic between points to the south, such as Gettysburg and Carlisle and points west on the William Penn Highway, and north on the Susquehanna Trail, comes over the Clarks Ferry Bridge. In other words, out of every four cars traveling in that general direction, three of them apparently use the longer route and cross the bridge. There seems to be just one reasonable explanation for this and that is that the Clarks Ferry Bridge is better known, and there is occasion sometimes to visit such places as Harrisburg, which would make the longer route preferable, and so on. It is reasonable to assume, however, that as the shorter route becomes better known, there will be some diversion of traffic to it. We have estimated that that diversion will be comparatively small. We have estimated that 20% of the

traffic which now uses the longer route over the Clarks Ferry Bridge and goes west over the William Penn Highway will in time use the shorter route and not the bridge; and of traffic going north on the Susquehanna Trail, we have estimated probably 10% of that will in time become accustomed to the other route, and find it preferable, and therefore use it.

Q. Would the traffic to and from the William Penn Highway and points south as well, be accommodated by the construction of the new bridge across the Juniata at Newport?

A. Yes, I think that undoubtedly, especially for traffic coming east on the William Penn Highway, the existing Newport Bridge is a discouragement to anyone who might otherwise have considered using the other route; but it is unlikely, unless they are very familiar with the new route, that they would turn off at Newport and cross the new bridge. They would more than likely keep on the concrete road and cross the Clarks Ferry Bridge. The total reduction that was made to allow for this shorter route to Gettysburg and Carlisle from Newport amounted to only about 2% of the total traffic; that is, this figure on page 27 in table 14,—this figure of 1,292,100 as the estimated traffic in 1935,—is only 2% lower than it otherwise would have been if we had made no allowance for the short route.

Q. And that figure before that allowance is shown in the middle of page 10, I believe, as 1,319,450?

A. Yes, that is right. The next step in the study was to determine the effect of these proposed highway improvements, such as the construction of a new

or improved good highway as we will have from Millersburg to Sunbury, and we also wished to determine what the probable effect of a new bridge in the vicinity of Millersburg or Liverpool would be, in regard to future traffic on the Clarks Ferry Bridge. We considered also what the effect of improved roads on the west side of the river from Duncannon to Lemoyne would be on traffic over the Clarks Ferry Bridge, and tried to arrive at a reasonable estimate of the effect of each one of these improvements. We considered that any off-hand estimate that one might decrease the traffic across the bridge by a certain percentage would not be strictly reliable, and since we have data as to the origin and destination of all traffic across the bridge, it was possible to apply the factors to each one of those component parts of the total traffic over the bridge. In other words,—I might cite an example,—traffic from Duncannon to Harrisburg would not be affected by the construction of a road from Millersburg to Sunbury. The diversion of traffic away from the bridge, caused by the construction of the road to Sunbury, would be zero insofar as traffic from Duncannon to Harrisburg is concerned. On the other hand, traffic from Williamsport to Harrisburg or Sunbury to Harrisburg might be affected materially by the construction of the Sunbury route.

We have prepared a detailed analysis of the effect of each one of these improvements, and tabulated them, and although the totals are not shown in the report, I might just cite an example, reading from the tabulation of the effect of the improvement of Route No. 5, Duncannon to Lemoyne. Now, we have in this table, the probable 1935 traffic over the

bridge, divided up as to origin and destination, in the same way as is shown in table 2 in the report. We have for example Route No. 22, Newport and points west of Newport,—points on the William Penn Highway,—and we have the interchange between that section and the city of Harrisburg; and the figure which we have for probable 1935 traffic between these points across the bridge is 216,500. That is the figure, it may be stated, for the highways leading to the bridge remaining unchanged.

Now, we have considered that traffic between points west on the William Penn Highway and Harrisburg, which now crosses the bridge; and we have estimated that it will be reduced only 10% by improvement of the road on the west side of the river from near Coveallen to Duncannon, a project which is now under way,—the heavy rock cut at the top of the hill. Considering the merits of the two routes, we have thought that probably 10% of the traffic from points west on the William Penn to Harrisburg might be diverted down the west side of the river. It might be considerably larger than that, but 10% is a reasonable estimate, we feel.

When the entire roadway on the west side of the river from Duncannon to Lemoyne has been improved, there will be a larger proportion of traffic use the west side of the river. We have estimated that probably in the neighborhood of 20% of the traffic which now crosses the bridge and proceeds down to Harrisburg will use the west side, remembering for the moment that the traffic we are considering is only that between Harrisburg and points west on the William Penn Highway.

Moving across to the next item in our tabulation,

we have the interchange between points west on the William Penn Highway and points south of Harrisburg and southwest of Harrisburg. The interchange of traffic between these two points will be more greatly affected by the improvement of a road on the west side of the river. Traffic, for example, bound in the general direction of Carlisle from Pittsburgh comes east over the William Penn Highway, comes up to the Bridge, and will have no excuse for crossing the Clarks Ferry Bridge to go down to Harrisburg and recrossing to the west side of the river. Undoubtedly the construction of a good road on the west side, down as far as Lemoyne, will take a large proportion of that kind of traffic. We have estimated then that 80% of the traffic which is bound from points west on the William Penn Highway to points on the west side of the river and south of Harrisburg will be diverted down the West Shore Road instead of coming over the bridge. That item, for example, gives this result. With the total of 35,440 cars, as the estimated interchange of traffic in 1935 between Route No. 22 west of Newport to points southwest of Harrisburg, that figure of approximately 35,000 would be reduced 80%, or to about 7,000, if the west side road were entirely and completely improved.

The same process has been carried out for the other improvements, and for all the items of traffic which now go to make up the total of cars crossing Clarks Ferry Bridge. Taking this one that we were just speaking of, we have an interchange, an estimated interchange, of traffic between points west on the William Penn and Route 209, the Millersburg Route, of approximately 21,000 cars. Now,

that item, of course, is not affected by the construction of a road on the west side of the river, and no reduction has been made to allow for construction on the west side of the river.

The process that I just described has resulted then in the series of curves which are shown on Plate VI. The upper curve is the estimated traffic across the bridge if the present highway routes remain unchanged. "A", which happens to coincide with the curve "D", is the probable traffic over the bridge if a portion of Route 5 is improved, Kinkora Heights to New Bloomfield Road. That is the portion which is now under construction, so that undoubtedly it will soon be completed. "E" represents the effect of the road from Sunbury to Millersburg. "E" represents—or rather "D" represents the effect of a new bridge across the Susquehanna River near Liverpool. "D" coincides with the curve marked "A".

Certain combinations were then worked out. For example, curve "E" represents probable traffic in case "A" and "B" are both carried out; "A" and "B" being the construction now under way on the west side of the river, and the road to Sunbury. "G", the lowest curve, represents probable traffic in case all the improvements here described are carried out. The combination of projects, of course, does not result in a decrease of traffic equal to the decrease caused by the separate projects.

As a final summary, we have included in the report a table shown on page 28, marked table No. 15, which indicates the probable gross revenue under the different conditions which we have just described, existing highways interchanged and the

improvement of the various routes, project "A", of course, being the one which is now under way. That table was prepared using rates which were in effect in the Spring of 1930. The reduction in tolls which has taken place recently will, of course, have the effect of reducing, probably in the neighborhood of 3%, the figures which are shown in the table as the probable future revenue.

Q. Table No. 15 then is a translation into dollars of the result that you tabulated on 14?

A. Yes.

Q. I call your attention particularly to the improvements that you have designated as "A" and "C", both of them are improvements in Route 5. Are they separate and distinct improvements, or does "C" include "A"?

A. "C" includes "A". "A" represents a portion of the total improvement, about a mile or so of road, and "C" represents the entire improvement from Duncannon to Lemoyne.

Q. Now, improvement "A", Mr. Jupenlaz, is under construction?

A. Yes.

Q. Do you have any opinion as to when it will be completed?

A. Yes, I understand from one of the engineers of the State Highway Department that the Department expects to remove the present detour about June 1, 1931.

Q. Now, improvement "B" on Route 14, Sunbury to Millersburg, has that been begun?

A. I understand that it has been begun.

Q. You understand from the Highway Department?

A. Yes, I don't know what progress has been made, but it has been started.

Q. Route "C", which includes the building and reconstruction on the west side, has not been begun?

A. No, I understand from the Highway Department that they have made some studies and surveys in the vicinity of Marysville to improve the railroad crossing or eliminate it entirely there; and that, of course, will be a very important part of the improvement on the west side road.

Q. Mr. Jupenlaz, what method did you use in converting the traffic figures on table 14 into the figures on table 15?

A. We took the total receipts from tolls during the year 1929, or rather we computed what the total receipts would have been in 1929 if the rates that were in effect during the latter part of the year had applied during the whole year. We then divided that by the total number of trips, or the total number of cars crossing the bridge, and arrived at a factor which was 10.52 cents per trip. That is the factor that we used for the estimates for the later years.

Q. Is that the average rate of toll per vehicle?

A. Yes, vehicle meaning automobile, truck or bus?

Q. Yes.

A. It does not include bicycles.

Q. Now, in making your estimate of future flow of traffic, you base your conclusions upon what traffic has been heretofore?

A. Yes.

Q. Plus population and automobile registration

estimates?

A. That is right.

Q. The traffic count which you made on March 4, 1930 at the different stations described was made only for the purpose of determining the origin and destination, and thereby determining the effect of these several improvements, is that correct?

A. That was true of the count made of traffic crossing the bridge. The counts made on some of the surrounding highways were utilized in estimating the annual traffic on the highways, but those figures were not used in estimating future traffic over the Clarks Ferry Bridge. The count of traffic over the Clarks Ferry Bridge on March 4, 1930, was solely for the purpose of determining the origin and destination of vehicles using the bridge. If the traffic across the Clarks Ferry Bridge on that particular day had been 50% greater or less, it would not have changed our final estimates.

Q. You did, however, use the figures obtained on that previous count of traffic over Route 5 on the west shore to determine the abnormal effect of the construction on the west side upon 1929 revenue, did you not?

A. Yes, that is right.

Q. Now, Mr. Jupenlaz, did you subsequent to March 4, 1930, make any other count or study for the purpose of checking and determining the accuracy of your original figures and conclusions?

A. Yes, we made a count on April 10, 1930, which was on a different day of the week and in a different month, to determine the origin and destination of vehicles using the bridge on that day. We wished to find out whether the same percentages as to origin

and destination would apply on different days. That has been assumed and taken for granted in a great many traffic studies, but in this particular case we thought it would be interesting to get an accurate check, and we have found that the percentage of traffic using the different roads agreed very closely with the results of the first count.

For example, in the report table 16, which is on page 40, shows a comparison of the results of the two counts expressed in percentages. Of course, the total volume was different on the two days, but what we were interested in in this particular case was to find out whether the percentage of traffic in the different classifications remained the same. You will notice, for example, in the second column, that for interchange of traffic "Between Mecks Corner and Clarks Ferry Bridge via Duncannon", and "Between Clarks Ferry Bridge and Harrisburg", it happened that for that one count as shown in line (b), the interchange amounted to 1.4% of the total traffic, and in the later count was 2.0%. Those percentages agree quite closely throughout the whole table. In very few instances is there a variation of more than 1%, which is to be expected, since it is reasonable to suppose that although traffic fluctuates from day to day and at different seasons of the year, the same factors which will tend to hold down traffic from one source will also tend to hold it down from other places; so that the proportion of different kinds of traffic, considering origin and destination, is found to remain fairly constant.

Q. So that the conclusions which you include in your original report, which were predicated upon the data taken in the traffic count of March 4, were

borne out by the check count of April 10?

A. Yes, they were borne out by the check count.

Q. And your report of the check count is contained on page 35 and the pages following, in Respondent's Exhibit No. 3. Mr. Jupenlaz, was 1930 a normal year for the Clarks Ferry Bridge, or was it affected abnormally by building and construction?

A. It has been affected very noticeably since the detour was placed on the west shore road, in the latter part of July, 1930, I believe. It since that day has deflected a great deal of traffic across the bridge which otherwise would have used the west side road. We found by examining the increase of 1930 traffic over 1929 traffic, by months, that there was a pronounced slowing up in the rate of increase for each of the months up to July, 1930. July, 1930, showed a definite decrease over July of 1929. However, since the detour on the west side of the river went into effect, August, September, October and November have shown very heavy increases over last year's traffic, with the probable result that the actual traffic in 1930 will be considerably higher than 1929, and somewhat higher than the estimate contained in our report.

Q. I now call your attention to page 31 of your report, plate III. On the three curves there plotted, the solid line there represents 1924 average. Will you state from what source you got that 1924 average?

A. Those curves for the 1924 average come from data obtained by the Pennsylvania Department of Highways and the United States Bureau of Public Roads, in a joint traffic survey of Pennsylvania

which they made in 1924. The report has been published, but all the details are not included in the published report, and the curves have been obtained from the Pennsylvania Highway Department.

MR. HULL:

We offer in evidence Respondent's Exhibit No. 3.

MR. MATHER:

No objection, sir.

THE COMMISSIONER:

Admitted.

MR. HULL:

You may cross-examine.

MR. MATHER:

I am afraid I will have to ask for the privilege of cross examining this witness at a later date, after I have examined the report. I can hardly do it now, and that is what we have to do with other reports.

THE COMMISSIONER:

I think that is a reasonable request.

MR. HULL:

I am agreed to that.

THE COMMISSIONER:

I think that is a reasonable request.

MR. HULL:

You don't want to ask him anything now?

MR. MATHER:

Not anything now.

MR. HULL:

If the Commission please, at the initial hearing, counsel for the Commission offered in evidence the report and order of the Commission in Complaint Docket, I think it was No. 6611, and also offered in evidence Complainant's Exhibit No. 1, being a study

of the books and records of the respondent company made by one of the Commission's accountants, which report included certain exhibits offered by the respondent in the former proceeding, Complaint Docket No. 6611, and in other parts of that report contained a number of references to figures in the former case. Inasmuch as the record shows it was then agreed that the respondent might offer the relevant and material portions of the testimony of the other case in evidence here, I have gone over the former record and tried to weed out everything that is not material, and now in accordance with that understanding, we offer in evidence, subject to the right of the Commission's counsel to check this and make any objection that he may care to make as to the relevancy, that portion of the testimony and exhibits in the former case which is embraced in the volume, the printed record, when the case was before the Superior Court, pages 80a to 99a; pages 120a to 251a; pages 260a to 279a, and that that may be made a matter of record, I offer a copy of that report from which those pages are taken.

(Paper book, in the Superior Court of Pennsylvania, Harrisburg District, March Term 1927, No. 17, Clarks Ferry Bridge Co., Appellant versus the Public Service Commission of the Commonwealth of Pennsylvania, Appellee, produced and marked Respondent's Exhibit No. 4, E. E. M, 12-30-30).

THE COMMISSIONER:

Do you want to object to that?

MR. MATHER:

I will offer a blanket objection to that right now, because it leaves out certain matters relative to certain bankers, and so on, and as I sense the offer now, I think I would like to amend it by adding the whole record.

MR. HULL:

If you want to press that after you go over the rest of the record, why, we can meet that situation then, but I think you will find that the rest of the record is of no value to you or anyone else.

We are in this position, if the Commission please. The report and order of this Commission and Complainant's Exhibit No. 1, with all the many references that are in there to facts, that can only be understood by the testimony of the preceding case, they are already in the record now in this report and order, and you cannot understand that unless you have what we now offer here. At the time that the report and order was offered originally, I objected unless Commission's counsel would agree that it might be supplemented by this, and unless this be admitted, then I want to renew my objection to the original report and order and Complainant's Exhibit No. 1, because I don't think it is admissible at all unless we are allowed to offer this.

MR. MATHER:

For Mr. Hull's information, and also the Commissioner's, I would like to add that when that agreement was made, there was also included in it the understanding that the Commission could rebut Mr. Hull's offer by such additional parts of the record as he had not seen fit to offer. I notice Mr. Hull has

omitted a considerable portion of the testimony of a witness named Reinhart, who was accountant for the contractor, and I would certainly want his testimony in the record if anything more goes into it.

THE COMMISSIONER:

We will admit this subject to the right of Mr. Mather to examine it and offer any further objection that he sees fit.

MR. MATHER:

That is entirely satisfactory to me, sir.

MR. HULL:

If the Commission please, that is the respondent's case, with the exception of one or two tabulations which we would like to make up from what is already in the record, and which can be presented at the time Mr. Mather cross examines Mr. Jupenlaz, or they can be filed of record meanwhile, but all the facts are in the record now.

THE COMMISSIONER:

That will be satisfactory to you, Mr. Mather?

MR. MATHER:

Entirely so.

MR. HULL:

With that exception, we rest.

MR. MATHER:

At the last hearing the respondent agreed to produce the Columbia-Wrightsville Bridge bid sheets in substantiation of Mr. Johnson's testimony. Is that ready?

MR. HULL:

No, I didn't understand it that way. When did we agree to that?

MR. MATHER:

Page 93 of the testimony.

MR. HULL:

I don't have it.

THE COMMISSIONER:

Mr. Mather, Mr. Hull said he does not have that.

MR. HULL:

There was the suggestion, Mr. Commissioner, and there is a point in the record at page 93, where, thinking that the witness had these bid sheets, we agreed to produce them, but as you read on in the record:

"THE COMMISSIONER:

We understood Mr. Hull to say they would be submitted.

THE WITNESS:

I have not the official bid sheets of this Columbia Bridge. I have a memorandum of certain information that I got, but no official bid sheets.

MR. HULL:

Q. Where did you get it from?

A. I don't recall now. I think it was previously published.

MR. MATHER:

That is exactly what we want.

THE COMMISSIONER:

From where?

MR. MATHER:

He said it was previously published. If he got something that was published previously in a newspaper that was erroneous, the record wants to show what he got and where he got

his information from. That is the reason I am asking for it.

THE WITNESS:

I did not base my figures on that.

THE COMMISSIONER:

Mr. Johnson said he would produce this information.

MR. HULL:

Q. Did you base your conclusions here upon those bid sheets?

A. No.

Q. Why not?

A. They have nothing to do with this particular bridge.

Q. You were here to estimate the reproduction cost new of a bridge at Clarks Ferry under the conditions surrounding the reproduction of such a bridge as of the day you made your appraisal?

A. Yes.

Q. And those bid sheets in the one case of the construction back in 1924 and 1925, and in the other case a construction 50 or 60 miles away under other conditions were used simply by you as a check on your own conclusions, is that right?

A. They were merely of interest in connection with my working out these units, but had no bearing on these particular unit prices.

MR. HULL:

That is all."

Now, that shows we did not have them, and the witness said at the time that he did not have them.

Then there was the request by Mr. Mather that he produce certain other information which he had, and by examination of him it was developed that he did not base his conclusions on that at all, but that having arrived at his conclusions, he merely checked from that. Now, I don't understand on the face of the old record that we were to produce anything, and I certainly would object now to putting in this record evidence which the witness said he did not base his conclusions upon.

THE COMMISSIONER:

Well, you don't have it.

MR. HULL:

We don't have the bid sheets.

MR. MATHER:

Mr. Johnson said he got certain information and considered it. Now, I want to know what he got. Mr. Hull, I don't think read all of the statements there. On page 93 I made this statement:

> "Then it is understood, is it not, that Mr. Johnson will produce the sheets which he had before him, one the bid sheet of the Clarks Ferry Bridge, and the other the bid sheet of the Columbia-Wrightsville Bridge under construction."

Now, it was my understanding at the time that was the final statement as to what we wanted to get. Mr. Hull acted on that, and in the afternoon session he had Mr. Masters identify the Clarks Ferry sheet, which was the only sheet that Mr. Masters spoke of. Now, I think his own construction of our statement on the record had been that he was going to produce these two bid sheets.

MR. HULL:

That is the only one we have. We didn't have the Wrightville sheet.

THE COMMISSIONER:

I understood from what was read that the witness said he never had it.

MR. MATHER:

He never had the original sheet, he said, but I want to know what the original estimate was that he found published and adopted.

MR. HULL:

He said he didn't adopt it, and he said he didn't predicate anything on it.

MR. MATHER:

That is true, he said he did not have it.

I have the bid sheet, and I am going to offer it. I want to offer it and want to compare it.

MR. HULL:

If you have the bid sheet, all right.

THE COMMISSIONER:

Will Mr. Johnson produce this; would you let Mr. Johnson produce it, or do you decline to produce it?

MR. HULL:

We don't decline to produce it, but we object to its admission as a matter that is irrelevant. If your Honor says we shall produce it, we will produce it.

THE COMMISSIONER:

If Mr. Mather wants that in, I think he has the right to have it. If he offers it, then that will be another thing.

MR. MATHER:

I am not going to offer it in evidence. Mr. Johnson's statement was that that was the basis of his

opinion, and that is a matter of substantiation of his statement. The bid sheet won't substantiate it, and if he can substantiate himself by some other papers that he has, why, all right.

THE COMMISSIONER:

Why not produce it at the next hearing?

MR. HULL:

I am put in the position that I am not producing something that I was supposed to produce, and I am trying to explain why it was not produced.

THE COMMISSIONER:

I understand you never had the bid sheet at all.

MR. HULL:

No, and if Mr. Mather wants to use it, when the time comes I will most strenuously object to its being offered in evidence.

THE COMMISSIONER:

All right, sir. We will meet that when it arrives.

MR. MATHER:

You are through then, are you, Mr. Hull?

MR. HULL:

Yes.

LYNN B. CURRY, a witness called in behalf of the complainant being duly sworn was examined and testified as follows on

Direct Examination

MR. MATHER:

Q. Mr. Curry, you are a member of the engineering staff of the Public Service Commission?

A. I am.

Q. What is your full name?

A. Lynn B. Curry.

Q. Will you please state your technical quali-

fications and your experience in the matter of engineering work?

A. In the educational phase, I am a graduate of Cornell University, College of Civil Engineering, with the degree of C. E., graduating in 1913. That statement, of course, includes all the qualifying classical education in high school, leading up to that point. In 1912, during the vacation period between my junior and senior year, I was employed by New York State Engineers, acting as masonry inspector on barge canal work west of Rochester, New York. Masonry inspector in that particular instance meant inspector of concrete work almost entirely, and that was the only type of masonry entering into that contract. It was known as Contract 61 near Brockport, New York. Immediately after graduation from college as a civil engineer, I again went into the employ of the New York State Engineers, and again on barge canal work, but this time in connection with water supply for the operation of the canal rather than the canal construction itself. My assignment for about ten months was the engineer corp at Hinckley, New York, where the Hinckley Dam Reservoir was being constructed at that time. There again, I was assigned to the duty of masonry inspector. That piece of construction work in dollars, was about one and a quarter million dollars, although the actual cost of the work exceeded that, but as it was let, that was the figure that I remember. It involved, as probably the largest item of all the construction work with reference to forming this large reservoir, the construction of a dam about 5/8 of a mile long. The highest and main portion of it being concrete, and occupying a section across the

branch of the Mohawk River, known as Canada Creek, or the larger branch of the river. It was of a length of approximately seven or eight hundred feet from concrete abutment to abutment, and the spillway section included valve chambers, valve houses. The remainder of that dam of 5/8 of a mile in length was earth embankment, concrete core wall with rip-rap on the upstream face. I had very little to do with anything in that dam other than the spillway section. The work was divided up in the construction season, when things were booming on that job, there were two and three shifts per day. I had charge of the inspection of the placing of masonry on one of those shifts, and as an indication of the size of that work, the largest month's work in concrete on the spillway section, that I recall was 25,000 cubic yards. I remember other normal months of one and two shift work that ran 8,000 yards, and sometimes more. That was the minimum that I remember.

Q. When you say masonry, do you mean stone work or concrete?

A. This was concrete work. Going further into detail, the main and massive concrete work on the spillway section included large quarry stone placed in the concrete, usually called plumps. They were from one cubic yard to two cubic yards in volume, sometimes slightly less than one cubic yard, but not many.

Early in 1914, immediately upon leaving this work that I have just described, I went in the employ of the Interstate Commerce Commission, Bureau of valuation of railroads. I started as a chainman in a field party, known as Roadway and Track

Party No. 5 of the Eastern District. I continued in the employ of the Bureau of Valuation till April of 1920. In that time of over six years I occupied various positions from the starting position of chainman to senior engineer, Grade 2, and in the final period of the field work, which ended about the first of the year 1920, I was in charge of the field party for a short while, and finally took all of the records of that field party to Washington. I remained in the employ of the Bureau of Valuation for three months in Washington, in connection with the work of clearing up, making detailed statements of field notes, field computations, the significance of price data that was gotten in the field, and submitted with the field notes of quantity, and under the Price Section of the Eastern District did a lot of pricing of the inventories and data that had been brought in both by my own party and some other parties in the field. In field work, the Bureau of Valuation with which I was connected through Roadway and Track Party No. 5, in the usual instances we covered roadway and track items which did not include buildings, signals and certain appurtenances that the Bureau of Valuation provided special parties to consider, but in instances we were required to not only inventory ordinary items of roadway and track, as I have just in a general way described, but we inventoried and obtained cost data and other data applicable to making a valuation of bridges, buildings, and all of the structures. This was particularly true with reference to railroads, where it was not convenient to set a division, as it was on such systems as the Pennsylvania Railroad and some of the major systems. One of the larger roads with

which I had a great deal to do in the computing of quantities and studying the cost data and getting road basis for prices of buildings and bridges covering the usual items of road and track work, was the Bessemer and Lake Erie Railroad. In that instance, as I remember, we covered every bridge on that road from East Pittsburgh to Conneaut, Ohio. It is a railroad with such construction of considerable magnitude, a heavy class of railroad traffic.

Beginning in April of 1920, I was with Gannett, Seelye and Fleming, Inc., a firm of consulting engineers in this city, Harrisburg. I was with that firm as a civil engineer until 1925, about August, I believe, of 1925. The two outstanding classes of work that I was engaged in with Gannett, Seelye and Fleming was construction work as resident engineer and as construction superintendent in connection with water works structures, principally dams, including a shoulder dam of the hollow concrete type, and the work in connection with that was improvement and repair, and doing a general kind of work in reinforcing it to overcome some leakage that was becoming dangerous, and it was a high type of waterproofing job. A very important part of my work which I was doing with Gannett, Seelye and Fleming was valuation work in connection with water works particularly. Aside from those two classes of work, there was a great deal of all kinds of work that came before me, which would be expected would come through a firm of consulting engineers of the type of Gannett, Seelye and Fleming. In 1924 I was construction superintendent of a piece of work that that firm had in Shamokin, which was a reinforced storage reservoir, two of

them, of similar construction, each having a capacity of 2½ million gallons. In general the dimensions were 160 feet in diameter and 16 feet clear height between the floor and the reinforced concrete cover. Since August of 1925 I have been with the Bureau of Engineering of the Public Service Commission.

Q. And as such engineer for that Commission, you take care of all, or the largest part of the cases involving work about water?

A. Yes.

Q. In such capacity did you make the previous study by the Engineering Bureau of the Commission of the structure involved in this case; when the appraisal was made by the Commission before?

A. I analyzed the report and made certain deductions in connection with two other staff members of the Bureau of Engineering, and under the direction of the chief of the Bureau. I made no independent valuation at that time, because I believe the assignment was to analyze the report and draw engineering conclusions and so set it up that it would be co-related properly.

Q. And subsequently you have been directed by the chief of your Bureau to make a study independently of the property now involved for the purpose of this proceeding?

A. Yes.

Q. And the yellow sheet which you have before you represents the summary of the figures at which you have arrived in accordance with that study?

A. Yes.

MR. HULL:

May I ask at this moment what will be the purpose of the testimony of this witness?

MR. MATHER:

Rebuttal of Mr. Johnson and Mr. White.

MR. HULL:

Well, is it to be rebuttal, or are you going to put in now an independent valuation of the property?

MR. MATHER:

It is an independent valuation of the property in rebuttal of Mr. Johnson's valuation.

MR. HULL:

We object to an independent valuation of the property as not properly being rebuttal. This is a complaint by the Commission, and the Commission presented its case and rested, and if it had considered the valuation of the property as either necessary or material to its case, it might have introduced that independent valuation originally. I realize, of course, that matters of admitting evidence or the order of admitting evidence is informal with the Commission, but I want to enter my objection to this as not being properly rebuttal.

THE COMMISSIONER:

You may have your objection noted, and we will admit it.

(Reproduction cost estimate of Clarks Ferry Bridge, produced and marked Complainant's Exhibit No. 3 E. E. M., 12-30-30).

MR. MATHER:

Q. Now, Mr. Curry, I show you a large sheet of yellow paper, of which some photostats have also been made, the original has been marked Complainant's Exhibit No. 3, and ask you if that is the sheet which embodies the final figures at which you have arrived in the studies of this bridge structure, and other items of the respondent's property?

A. It is.

Q. Do you have a copy of it before you?

A. I have.

Q. Now, Mr. Curry, will you go over it, and omitting the more of less minor items where your figures do not differ materially from those of Mr. Johnson, and will you please point out the basis of your figures, and what the differences amount to?

A. For a clear understanding at the start of the physical property listed and ending at the first full line across the sheet, that is not an independent inventory by me, it is a statement of the quantities as I knew them to exist from all that has gone before in this record. In other words, there is no dispute about the quantities, so far as I know, so that everything included in physical property down to the first full line or bar across the sheet, and over to the columns marked "quantity" and "unit", including those, are the same as may be found, as far as I know, in the respondent's exhibit and inventory.

Q. Now, with respect to the unit prices which you have put on, Mr. Curry, your sheet is marked at the top, "Price basis, present day". Will you explain to us just what weight you have given present day conditions?

MR. HULL:

Now, just a moment. Do I understand that this valuation is composed of prices as of December, 1930?

MR. MATHER:

That is the purpose of my question, to get that clear on the record.

MR. HULL:

I beg your pardon.

MR. MATHER:

He cannot answer it flatfooted, yes or no, and that is the reason I asked the question the way I did.

THE WITNESS:

It is the generally prevailing prices in the period just passed. It is not a set date price, but it is as of the last two or three months—there has not been very much change. It is not an attempt to set any particular date, it is about the price level of these last past months.

MR. HULL:

Are you going to ask anything there about the date of his estimate?

MR. MATHER:

Q. How would the figures differ—

MR. HULL:

Just a moment. We object to the use of this exhibit under this testimony if based upon prices prevailing in December, 1930. The rule is, as I understand it applicable to this inquiry, that it shall be a valuation of the property at spot cash prices as of the date of the institution of the inquiry, which was about September 1, 1929.

MR. MATHER:

Whatever the legal question as to what the Commission is trying to find out, it is clear from the Federal Supreme Court's decision that the fair value of the property is to be as of the date of the inquiry and for a reasonable period of time thereafter. I think the answer to my next question will largely answer Mr. Hull's objection.

MR. HULL:

As I understand it must be based on cash prices at the time of the inquiry.

THE COMMISSIONER:

Let Mr. Mather ask his next question, which he says will clear the atmosphere.

MR. MATHER:

Q. Mr. Curry, how would your estimate differ, if at all, if it were of the date of September, 1929, I think is the date of the American Appraisal Company's appraisal?

A. Prices are slightly lower in the recent months than they were in September of 1929. The general figures, or price levels, are probably best expressed in the terms of the engineer's index, that is, as I recall it, I don't have the figures before me, but somewhere between 5 and 10 percent lower than a year ago, but I have not attempted to reflect in this price basis the absolute minimum. For instance, the labor that might be used just now under present conditions, I have full knowledge that across the river, and in Lemoyne and that section, Elizabethtown, not far from here, and some other places, that it is really possible to get labor for 25 cents an hour.

Q. Do your figures reflect that information at all?

A. I would say no.

Q. I will repeat my original statement, Mr. Curry. Do your figures compare as of the day in 1929 which Mr. Johnson used, leaving out for the moment the question of reinforced iron—would they be any different?

A. Very little, if any. I could not tell without quite a study just how much difference there would be, but it is very slight.

MR. MATHER:

Does that answer your question, Mr. Hull?

MR. HULL:

It answers my question, but not my objection. His testimony is that this was not based upon prices in September of 1929; that he does not know just what the difference is, that it may have been 5, or it may have been 10 percent; he has indicated that he knows we are in a period of depression and great unemployment; that labor now is much cheaper than it was in September of 1929, and he cannot tell us he says, without considerable study just how the prices he has would compare with those prices.

THE COMMISSIONER:

Well, the last statement the witness made was that he did not consider this depression, did not consider this 25 cent labor, and that the difference, if any, would be very slight between this time and 1929.

Cross Examination

MR. HULL:

Q. Do I understand, Mr. Curry, that you correct your former statement then, and that there is not a difference of 5 or 10 percent between your estimates here and the estimates that you would make as of September, 1929?

A. Well, 5% difference would not be a great difference in my mind.

Q. Is it 5 or is it 10?

A. I cannot say, I would expect it is about 5%.

Q: How did you arrive at your labor price?

A. The labor price here was 35 cents per hour, that is the extent to which this reflects the present depression.

Q. Do you know what the price of labor was in September of 1929, in the vicinity of Clarks Ferry?

A. I don't know any particular labor price, but I know that labor to do that work could be secured for 40 cents. Were it not possible to secure labor at 40 cents at local sources, the labor would be secured in some other place where it could be secured on that basis, because it was available for work.

Q. This labor could either have been obtained in the locality or transported there and obtained at 40 cents an hour?

A. Yes.

Q. And you say you have used 35 cents, is that correct?

A. That is about the figure that enters into this computation.

Q. Now, 5 cents on a basis of 35 cents is more than 5%?

A. But materials would offset and change that figure so that you could not take the 5%—the actual percentage on labor charged as an index to the total charge or difference.

Q. Isn't it a fact that your 5% is a mere guess?

A. No, it is not a mere guess, but it is not—I don't put it up to be from my own knowledge of having gone over this and finding out how much it is, it is just my general knowledge of price levels.

MR. HULL:

Now, if the Commission please, on the witness' admission we must renew our objection. We don't think this valuation will help us any when we have to guess what it might be in order to compare it with the other.

THE COMMISSIONER:

You may have your objection noted. You may proceed.

Redirect Examination

MR. MATHER:

Q. Now, Mr. Curry, will you please go over your sheet and comment on the material variations from the figures submitted by Mr. Johnson. Is item 10 the most important one?

A. It is my opinion that in answer to your question item 10 would be the first item worth mentioning.

Q. Proceed then with item 10.

A. It is 1:2:4 concrete in the arch rings, retaining walls, abutments, spandrel walls, arch rings saddles, cross walls, road curb and slab. That is an item of 9,496 cubic yards, which I priced at a unit cost of $26 per cubic yard, and the total cost for the item on that basis is $246,896. Do you want me to point out the difference from the other?

Q. What was Mr. Johnson's figure on that?

MR. HULL:

The unit price was $28.15, a total of $267,312, page 29.

MR. MATHER:

Q. Suppose you state for the record your component figures for your $26 unit cost?

A. That figure of $26 is made up of $6.25 for forms; $6.70 for materials; and labor and placing and so forth, $8.50. Those three component parts total $21.45, to which I have added for the contractor's overhead 10%, or $2.15. That increases the amount to $23.60, and 10% profit to the contract of $2.36 makes a grand total of the unit price of

$26.20, and I have used $26 even.

Q. What is your opinion as to a reasonable estimate for this item?

A. I think that estimate is an ample price.

Q. Will you proceed with your next item then?

A. The next item of consequence in the difference between my setup and the American Appraisal's setup occurs in reinforced steel in the concrete, item No. 17. The quantity of this was 1,079,718 pounds. I find the unit cost for the estimate of .046 cents per pounds, and the amount for that quantity is $49,667. The American Appraisal Company's figures for that same item and same quantity of the item is at a unit cost of .0637 cents. The total for that item is $68,778.04. The next item of noticeable difference occurs in item No. 20, covering coffer dams and taking care of water. I have a lump sum of $42,000 for that. The American Appraisal Company's valuation carries a figure for that item of $51,681.82. It does not occur to me that there is any other item that needs to be particularly pointed out. Some of my figures—the remainder of my figures are different from the American Appraisal Company in general, some higher and some lower.

Q. And in your opinion those items where you have varied from the other appraisal, those are reasonable and adequate amounts?

A. Yes.

Q. Now, as to the intangibles below the first general bar, will you state what conditions you have assumed as the basis for these?

A. I assume that the Clarks Ferry Bridge Company and the structure would be fully reproduced at this time—perhaps I didn't understand the ques-

tion exactly.

Q. What have you assumed in the way of highways and general developements and other matters?

A. Everything in connection with the surroundings of that bridge and organization would be as they are now. The highways would be in existence in the vicinity and leading across state the same as they are now. The early history of this situation was that there was a ferry across this river at that point. Later on there was a previous bridge. At this time of reproducing this bridge, we have a knowledge of there having been either there or on a nearby site, a bridge existing for about 100 years.

Q. Now, specifically on engineering, will you tell us how you arrived at that sum?

A. The engineering for the Clarks Ferry Bridge was largely done as recently as 1924, or about that time. The actual cost shown by the company's record for the engineering done on the present structure is about $39,300, approximately. I took cognizance of the fact that there were certain items of physical property that were incorporated into the new bridge on which the item of engineering is shown in the company's books. In the figure that I just gave, I also took cognizance that there were the original parcels of land that were used in connection with the former bridge, and different properties that have now become part of the land used in the new structure, and that there would be some engineering in connection with the surveys and titles perhaps of that land, if it were to be reproduced today. This figure of $43,000, that I estimate to be the reasonable figure for engineering, is largely based on the starting point of the actual cost of

the engineering that was done about 1924. I consider that it was an ample figure, and it cost that much at that time, and it is likely it would cost about the same now.

Q. Now, have you any comment to make on the other four items?

A. Organization and promotion cover the preliminary study with reference to such a proposed bridge as the Clarks Ferry Bridge, including traffic and preliminary cost estimates, the existence of the corporate organization, including legal expense of the necessary proceeding for organization; the fees and the expenses of issuing—of getting out the securities and such other necessary legal documents as are necessary. The next item that I include under that is franchise permits and so forth ahead of the time that construction would be taken up; promoters, clerical salaries, expenses of taking up such a project initially with the financiers to see that the project could be financed and where it might be financed to advantage if at all. The interest charges on all the items carry this up to a time where construction work might proceed and with some allowance for miscellaneous expenses that might not be covered in the items that I have specifically mentioned. For the item of administration, legal and general expenses, I would state that item covers the expenses during construction to the corporation arising out of the items of compensation of executives, clerical and office expenses, the incidental corporate expenses, taxes during construction, legal fees applicable constantly to the construction work, and the item of miscellaneous charges that might not be fully covered for the classifications I have mention-

ed. The cost of financing—

Q. Did you cover interest during construction?

A. The interest during construction are the interest charges arising during the construction period. I assume a construction period of one year. Usually, however, the construction should be carried out between the period of late Spring and early Winter, but it would hold over until the months of Winter in clearing up the job and turning it over.

Q. In connection with that, Mr. Curry, how does the fact that the work is done within one year affect the unit cost which you have used for the construction work?

A. What that might have been if I had assumed a longer period or a shorter period?

Q. Exactly.

A. I took the most economical price that would obtain for the work being done in a one year construction period which I have mentioned.

Q. And your unit prices contemplate the use of men and equipment which would permit the work to be done during the period you mentioned?

A. Yes.

Q. Now, your cost of financing?

A. It does not occur to me to make any specific explanation of that, other than to say that it is the actual cost to raise the money which arises out of the brokerage or peddling of securities, bond discounts.

Q. Now, have you made a study of the existing structure and other property in the vicinity from the point of view of accrued depreciation, and probable future depreciation?

A. My study of the matter of depreciation in a

manner, of course, started during my consideration of the former case and my knowledge of conditions, but more particularly I base my present thoughts as expressed in this exhibit on a visit and inspection of that bridge at a time that I cannot tell you the exact date, I could if I had my records, but it was last spring.

Q. However, it was prior to the last hearing?

A. I think it was.

Q. Proceed.

A. At which I observed all of the items, what might be called or termed observed depreciation, that anyone could observe—

Q. Suppose you tell just exactly what you observed in the way of depreciation of the bridge, as to the physical condition of the bridge?

A. Well, as to the physical condition of the bridge, the bridge is in general what I would call a fair and about normal condition. However, I noticed just what might be expected in a reinforced concrete structure, the cracks, and the reinforced steel in some instances were being effected by corrosion and oxidation to the extent that it showed through in the surface by the color of iron oxide. In a very few instances there are points where you could see the steel. By all this I don't mean that the bridge is in bad condition, but it is evidence of what may be expected from this type of structure, which is reinforced concrete, for bridge work, and it leads me to the conclusion that that bridge is not particularly different from what the general expectation would be for concrete bridges, and it is my judgment in the consideration of this bridge at the present time that its life expectancy might be 40 to 50 years. I

have chosen for the purpose of this reproduction cost computation a life expectancy of 45 years.

Q. Now, what other factors of depreciation do you consider other than the factor of observable wear and tear?

A. In the first instance there is the element that is always present, that a certain time has elapsed of the useful life of that bridge, in this case it is about 5½ years. We must recognize the fact that it has passed through that much of its life of usefulness. The next item that I give consideration to, there is always the possibility of obsolescence or inadequacy entering in a large manner into the final result as to the life of the structure. The bridge is a two lane traffic bridge, one in each direction, and there is the question of whether or not the traffic will become such, or the type of vehicles, or the change in the character of traffic otherwise, that this may be inadequate in a much shorter time than anyone could possibly clearly anticipate just now. We do know that structures, bridge structures on highways are being built with the idea that they will be considerably increased, and it is quite common for the present bridges to be built with at least a 30 foot roadway. There is a definitely known item of what may happen in damage to the bridge either from the river or from other kinds of accidents, or unusual hazards that might arise. It is conceivable that the usefulness of that bridge might be almost totally impaired by some such accident in its early life. It is possible that the bridge may have a useful life of 80 years, however, as I have said, I concluded that a fair and reasonable presumption might be 45 years.

Q. And as a result of your study you have consequently determined the accrued depreciation to be what?

A. $41,403, arrived at on the 4% sinking fund method as shown on the sheet, as of the date of May 30, 1931, which is the end of the sixth year of its life.

Q. And in your opinion does the figure which results from the application of the sinking fund method on the 4% basis appear to be a reasonable figure in the light of your study of the bridge structure and the history of the bridge?

A. It does.

Q. Now, Mr. Curry, what I should have asked you before, your figures and your thoughts in regard to this structure have been referred to the assistant chief of your Bureau and have been passed upon by him?

A. Yes. While he didn't attach his formal approval, he told me he approved.

Q. And that is Mr. L. G. Krause?

A. That is right.

THE COMMISSIONER:

The time of adjournment is almost here. Would you just as soon cross examine at a future hearing?

MR. HULL:

I believe I would. It would take me quite a while to do it now.

THE COMMISSIONER:

Have you anything else to offer, Mr. Mather?

MR. MATHER:

Nothing now.

THE COMMISSIONER:

Then I think we will postpone this cross examina-

tion for some future hearing. We cannot go on tomorrow.

MR. HULL:

I want to make this request of Mr. Curry. That between now and the next hearing he find and bring with him to the next hearing his detailed estimates of item No. 20, Coffer Dams and Taking Care of Water, and the next item below it, not numbered, Electric Lighting Facilities and Miscellaneous Bridge Appurtenances, and the item, "Old Structural Items of Former Bridge Structures Incorporated in Present Bridge."

Hearing continued to a time to be fixed by the Commission.

FOURTH HEARING

Hearing held at the offices of the Public Service Commission, Harrisburg, Pa., on Wednesday and Thursday, February 25th and 26th, 1931, at 9:30 o'clock, a. m., Eastern Standard Time.

COMMISSIONER BROWN, PRESIDING

(Same appearances as at first hearing)

MR. HULL:

If the Commission please, before proceeding, I should like to say that on the examination of the testimony taken at the last hearing, particularly the testimony of Mr. Jupenlaz, a number of steno-

graphic errors have been discovered. They are rather numerous, and I can either read them into the record now, or I can furnish to Mr. Mather a schedule of them afterwards, as you choose. They do not affect the sense of the testimony at all.

MR. MATHER:

I have no objection. I have a similar list of errors in Mr. Curry's testimony.

MR. HULL:

I suggest we exchange these memoranda.

THE COMMISSIONER:

That will save time.

EVIDENCE ON BEHALF OF THE CLARK'S FERRY BRIDGE CO.

WILFRED JUPENLAZ, cross examination resumed.

Cross Examination

MR. MATHER:

Q. Am I correct in understanding you prepared yourself the report which you offered in evidence at the last hearing?

A. Yes, although I had a number of assistants in the office to compute the figures.

Q. Your table 1 on page 14 is a statement of the passenger automobiles, trucks and busses, and the total for the two. Did you have a copy of Mr. Keen's report when these figures were made up?

A. No.

Q. Have you made any check on your figures, as against his, as to any possibly discrepancies?

A. No, although it should be kept in mind that the figures shown in table 1 include an allowance

for traffic which operates under a monthly basis.

Q. On the basis of an assumption of 60 trips a month per vehicle?

A. Yes.

Q. Just what have you included here as trucks and buses. Have you included anything more than trucks and buses specifically?

A. No, if you mean whether, or not, we have included such things as trailers, we have not.

Q. You have not?

A. No.

Q. Does your volume of traffic both as to what you have found the books showed for the past, and what you have estimated for the future, allow for such things as trailers, motorcycles, horses and wagons, and cattle, and so on?

A. Yes, these figures, both in table 1 and our estimated future traffic include only automobiles, trucks and buses, simply as a simplification, and then when we estimated the gross revenues, we held that the same buses—we took the probable total revenue, using the estimated traffic in automobiles, trucks and buses as an index.

Q. You took the volume of this other business as being so small as not to warrant alteration?

A. Yes, although that other traffic is given weight in the estimates of future revenues.

Q. In what respect?

A. Because the factor, which we used to determine the probable gross revenue, was determined by dividing the total revenue for a given year, according to the records, and that total revenue would include such things as trailers and motorcycles, and—

Q. Then you did include trailers and other things

in determining the average revenue per vehicle, but you did not determine the total number of fare-paying vehicles of one kind or another?

A. I don't know whether I understand your question exactly.

Q. As I understand your statement, you did include trailers, motorcycles and so on in determining what the average vehicle across the bridge paid?

A. Not exactly, no. What we did in order to determine our factor of 10.52 cents per vehicle was to take the total revenue received during one of the past years, and that total revenue included the revenue from passenger cars, trucks, buses, trailers, motorcycles and everything else, and divided that total revenue by the number of trucks, buses, passenger cars, and so on, so that figure is the amount of revenue which might be expected for a given number of trucks, passenger cars and buses.

Q. So that the 10.52 cents would be proportionately higher for these trucks and buses, because these motorcycles and so on were actually in the amount, or not?

A. That's correct.

Q. You actually used the year, 1929, I take it?

A. I believe so, yes.

Q. If for any reason the type of traffic over the bridge would change, that factor of 10.52 cents would change also, would it not?

A. Yes, somewhat.

Q. Your study makes no allowance for that possibility?

A. No, we have considered that any changes in the character of the traffic will probably be so small as not to affect the result. As a matter of fact, we

have compared the classification of traffic in different periods, so as to find out whether the character changed appreciably in different periods, and we found that the change was so slight it would be hardly worth making allowance for it.

Q. In the light of that last remark, let me call your attention to the fact that in August, 1927, the buses were 98 in number; the corresponding month of 1928 they were 329 in number, and the corresponding month of 1929 they were 782 in number. Do you still want to be understood as saying that your opinion was not materially changed, in the change going on now in the type of business going over that bridge?

A. No, because buses are such a small percentage of the total, and, of course, the figures you gave are for single months. Taking the year as a whole would—

Q. Would you say they were not average months?

A. No, August is a very high month.

Q. Is the trend in these three Augusts the same as the trend in any other month over the three years I mentioned?

A. I don't know.

Q. Do you want to be understood as saying that in your opinion bus travel over this bridge is not going to increase materially in the next four or five years, such as you have included in your report?

A. Not sufficiently to change the factor which was used, materially; that is, of course, the study was made with the intent of producing results within a reasonable limit of error, and I think that the changed character of traffic would produce results still within reasonable limits of error.

Q. In that total you were just speaking of, you note an increase in traffic in 1926 over 1925 of 113,000?

A. Yes, approximately.

Q. In 1927, as against 1926, you have 115,000, do you not?

A. Yes.

Q. And then, jumping to 1929, where you have 1,096,000, so actually your increase is 345,000, is it not, for two years?

A. For two years?

Q. Yes?

A. Approximately, yes.

Q. Bringing it down to what you estimate as normal for 1929, you concede an increase of 257,000, is that correct, roughly?

A. For the two years?

Q. Yes?

A. 257,000, yes.

Q. As against that average of the last two years of about 128,000 or 129,000, for each year, I mean, you estimate that in 1930 the increase will be only 102,000?

A. Yes.

Q. Then next year you say it's only going to be 60,000, that's your table 14?

A. 60,000, yes.

Q. Then you cut it to 40,000?

A. That's right.

Q. And then to 30,000?

A. Yes.

Q. Then to a measly 17,000?

A. 17,000, yes.

Q. Why do you estimate the increase is going

to drop off so materially, as compared with the other crossing increases we have had in the last five years?

A. For a number of reasons. To get back to the fundamental basis on which the 1935 estimates were determined, they were determined from estimates of increase in registration in the tributary area, giving due weight to the origin and destination of the traffic which uses the bridge; and the high increase from 1925 to 1930 should not be used as an index of the future increase, because it is a well known fact that during the five years from 1925 to 1930 a great number of important road improvements were made in the highways leading towards the bridge, and these improvements were largely responsible for the increase. That is, the 1935 estimates were determined from the probable future increase in registration, and the figures from 1930 to 1935 were merely interpolated.

Q. Do you want to be understood as saying that in your opinion, as a traffic engineer, all the roads built in the last five years have tended to increase the traffic on the bridge, whereas any roads that may be built in the next five years tend to take it away from the bridge?

A. That is substantially true, due to the peculiar layout of the highways round about the bridge, those that have been improved, and those that are likely to be improved in the future.

Q. Do you happen to know when the road from Newport to Mecks Corners, and thence to Carlisle, was built?

A. I don't remember the correct date of that.

Q. Would 1926 sound familiar to you?

A. I think it was about that time.

Q. You made your study in March, 1930?

A. That's right.

Q. You made your study, as I understand it, by an eleven hour check of the origin and destination of the vehicles going over the bridge on Tuesday, the 4th of March, 1930?

A. Yes, an eleven hour check was used to determine the origin and destination.

Q. Then you checked that by a later study on the 10th of April?

A. We checked the origin and destination, yes.

Q. And you found that the percentages as to where traffic came from, and went to, were practically the same in those two days?

A. Yes.

Q. I think you said at the last hearing that was as it should be, because the factors that tend to make traffic increase in one place at one time, as against another time, would apply all over the section, and applied to that kind of traffic, the percentage would remain the same?

A. That is true.

Q. You have a table here, or a plot, rather, plot 4, that shows three graphs, in one is the total traffic, the other is trucks and buses, and the third is local traffic, and the same fluctuation is much less for the local traffic than it is for the other two?

A. Yes.

Q. Does that corroborate your statement in the record at the last hearing?

A. Oh, I think that's an entirely different subject. The question that you asked refers really to all of the local traffic, or all the through traffic; that

is, there is greater seasonal fluctuation in traffic coming from long distances than there is in purely local traffic.

Q. You mean to say that through traffic, for instance, will increase in summer time much more materially than local traffic will?

A. Yes.

Q. Then what you meant to say at the last hearing was that there would not be much change between March and April, but the cross sections of your traffic would vary, say, between April and August, the through traffic increasing in proportion, is that correct?

A. No, that is not correct. We made allowance for the seasonal variations in determining the amount of through and local traffic from different points.

Q. What I mean is this: you found certain cross sections existing March 4th?

A. Yes.

Q. As I understand your statement now, you estimate that some cross sections would not apply if you had made your test on August 4th, but you would have had a greater proportion of through traffic?

A. Yes, we would have a greater proportion of through traffic in August, that's true.

Q. How did you determine what that cross section in August would be?

A. From the curves on plot 4.

Q. Where did you get that curve?

A. The source of the upper curve, of course, would follow the total over Clark's Ferry bridge in 1929; that curve represents the percentages, what

the average is in each of the twelve months of the year. The total trucks and buses over Clark's Ferry bridge in 1929 comes from the same source.

Q. You got that off the books of the company?

A. Yes.

Q. How did you tell local traffic?

A. The local traffic curve represents a composite curve, which was made up by applying the record of the traffic over certain approaches and highways, which might more nearly represent the local traffic, using for example the Delaware Bridge between Philadelphia and Camden; using the traffic through the Holland Tubes under the Hudson; traffic on the road between Baltimore and Washington.

Q. Would you call those approaches or highways all routes primarily for local traffic?

A. Yes. These curves were all plotted, and superimposed one upon another, and that followed rather closely this curve which is marked local traffic over Clark's Ferry bridge in 1929, and it is well known that truck traffic is more predominantly local than is passenger car traffic, and for that reason—

Q. What is your definition of the word "local," which you are using so frequently?

A. For the purposes of this study, local traffic was traffic which either originated within fifty miles of the Clark's Ferry bridge, or was bound for some point not more than fifty miles from the bridge.

Q. Is that the sense in which you are using it now?

A. Yes.

Q. Traffic from Philadelphia to Atlantic City over the week-end over the Delaware River Bridge

is that what you call local traffic?

A. Yes.

Q. But that would not be true if people came from Harrisburg and went to Atlantic City?

A. You are correct.

Q. That's the sense in which you used the word "local" on this plot?

A. Yes. This curve was utilized in adjusting the figures for through and local traffic as determined from the count of March 4th; that is, we found that a certain percentage of the traffic on March 4th was local. However, for the whole year we determined that a smaller percentage of the traffic over the bridge was local, and this curve was utilized to determine what that percentage is likely to be.

Q. So that as far as your actual knowledge of conditions is that exist at Clark's Ferry, you are limited entirely to your two days in the spring of 1930, and in your determination what the average cross section throughout the year would be, you are depending on your general knowledge of highway conditions and traffic trends, is that correct?

A. Yes.

Q. Where did you get that information as to the other bridges you spoke about?

A. Some of the information is given in a report of the Regional Survey of New York, and I believe that the figures for the Holland Tubes were determined by writing directly to the Port of New York Authority.

Q. How about the Delaware River Bridge, where did you get that?

A. I don't remember the source of that.

Q. What are the points particularly to which

people go in crossing over the Clark's Ferry bridge, which are comparable to cross-river traffic over the Delaware River Bridge. The Delaware River Bridge in other words, is the approach between two cities and their suburbs, cities which are of large size?

A. That's true.

Q. That then does not apply at all to Clark's Ferry?

A. No, it doesn't. That's the very reason that we plotted the curve of traffic over the Delaware River in order to determine how local traffic varies during the year, and it's reasonable to suppose that local traffic over the Clark's Ferry bridge varies from month to month, approximately, along the same curve as local traffic in other parts of the country of about the same climate.

Q. That is local traffic in your definition?

A. Yes.

Q. Would you assume that the type of local traffic, namely, traffic between Philadelphia and Camden would be the same type of local traffic as goes over the Clark's Ferry Bridge, using your definition of local, which would include a road from Philadelphia to Atlantic City or from Harrisburg to Erie?

A. Yes, I think it would be quite similar.

Q. You think traffic from Philadelphia to Camden, which is purely within 20 miles, would be no more steady and unfluctuating than traffic from here to Erie?

A. Not a great deal, because, of course, there's the question of commuters, and that has much greater volume, undoubtedly, across the Delaware River Bridge; but, on the other hand, there is traffic of that character utilizing the Clark's Ferry bridge.

Q. Nothing like the proportion there is on the Delaware River Bridge in Philadelphia?

A. I think probably it would be somewhere near the same proportion.

Q. Where would people commute from over the Clark's Ferry Bridge?

A. Duncannon.

Q. To Harrisburg you mean?

A. Yes.

Q. Is that all?

A. Yes, I think it is.

Q. Have you any idea how many of them there are?

A. I think it can be determined from our table.

Q. Would it not probably be equal to the number of monthly tickets you had out?

A. I don't think so. Our table shows it, though.

Q. You mean table 2?

A. Yes, table 2. It's an interchange of traffic from the section, which is marked between Mecks Corner and the Clark's Ferry bridge by way of Duncannon and Harrisburg; on the day the count was made there were 100 such vehicles out of a total for local traffic of 946. In other words, about one-ninth.

Q. You have no definite knowledge of how many of them were commuters, and how many of them may be making a single day trip, do you?

A. No.

Q. Have you any idea what the monthly tickets were about that time, the total number?

A. I think I can find those figures. I don't have it right here.

Q. Mr. Keen's exhibit 15, on his exhibit shows

33 for the month of January, and 31 for the month of February in that year. We don't have March here. Does that seem to you to be about right for March?

A. For monthly tickets?

Q. Yes?

A. I could not say. I would be glad to get the figures. I have them.

Q. They are in the record. I won't ask you to produce them. As I understand you, you treated your study for the 4th of March in the light of your general knowledge of the way traffic shifts throughout the year?

A. No, the one and only purpose of the count of March 4th was to determine the origin and destination.

Q. On that particular day?

A. Yes.

Q. You determined the origin and destination on an average day in the year by construing your information of March 4th in the light of your general knowledge of other bridges and roads?

A. That's right.

Q. In order to test your 1929 experience, because of detours in the vicinity, you treated your study of March 4th in the light of your general knowledge, and what happened 11 hours out of the 24, and tested it again on some other day a week or so after?

A. Not from our general knowledge, but rather from the study of the Clark's Ferry records.

Q. The Clark's Ferry records?

A. Yes, showing the seasonal variations of traffic and daily variations.

Q. Your plot 3 in your exhibit, that is based on a Highway Department table, is it not?

A. The curve, March, 1924, average for Pennsylvania, is.

MR. HULL:

Q. It is what?

A. Is a Highway Department curve.

MR. MATHER:

Q. This is entirely a Highway Department sheet, isn't it?

A. No, the information shown in the dotted lines was determined from the records of traffic over the Clark's Ferry bridge.

Q. And the solid lines are Highway Department information?

A. Yes.

Q. You superimposed your figures on theirs?

A. Yes.

Q. You have in general, as I see by your preface, followed a report issued by the Department of Highways of this State, haven't you?

A. We have used some of the data, and reviewed it, and considered its usefulness in connection with this study.

Q. Yet you found their estimates on Clark's Ferry have not proven true by a very wide margin, did you not?

A. That's true.

Q. You talk about the road through Meek's Corners diverting traffic possibly as the road becomes better known, will you tell us what kind of a road that is?

A. Part macadam and part concrete.

Q. Do you know what portion?

A. The portion from Duncannon to Meck's Corners in macadam, and I don't know how much of it is concrete. A portion near Meck's Corners is concrete, and in estimating the effect of that road we referred to the map of the Highway Department showing the pavement by types, but I don't remember—

Q. And the far greater part of the road is macadam?

A. I don't remember whether it is or not.

Q. You don't know?

A. We considered that at the time, but I don't recall offhand.

Q. You said a while ago that as far as you could recall the road was built about 1926. It's a secondary highway, isn't it?

A. It's not indicated as a secondary highway on the State Highway Department road map.

Q. Is it indicated as a primary highway?

A. It's shown as the same width, for example, as the Susquehanna Trail.

Q. Is it?

A. Yes.

Q. Does it have a yellow line along the side, as the Susquehanna Trail is shown?

A. There are no yellow lines on the map that I refer to. The map I refer to is a map published for general tourist information. It doesn't show any highway types.

Q. It doesn't show what road is primary and what road is secondary?

A. That depends on what you mean by primary. It indicates the relative importance of the different State highways by the width of the line.

Q. There are only two widths?

A. Yes.

Q. All State highways are shown as solid roads except dirt roads, is that correct?

A. Yes.

Q. This particular map you are referring to shows macadam roads, waterbound macadam, the same way that it shows concrete?

A. That's right. I am not sure about waterbound macadam, whether a distinction is made there, or whether it is made with bituminous macadam.

Q. Do you know what the route number is as you came down the Juniata River, route 22 U. S. is it?

A. Yes.

Q. When you leave that route at Newport you get on another route?

A. Yes.

Q. Do you know that number?

A. I believe 35.

Q. Isn't that route 5?

A. I don't know. If you have a map I can refer to it.

Q. What's the route number from Meck's Corners to Carlisle, that's still a different number, isn't it?

A. No, I believe in the map, the latest Highway map, that is shown as one route from Newport down as far as Carlisle; but I have a map, and it would be very easy to check up.

Q. Suppose you do?

A. The route number 5 is from Newport to Meck's Corners, and 35 from Meck's Corners to Carlisle.

Q. Route 5 comes over to Duncannon from Marysville?

A. That's right.

Q. You said that road was built in 1926. Whatever effect that may have on traffic coming down the Juniata and coming into Harrisburg or points south, that effect would have been felt before now?

A. I think the effect we were speaking of in our report is a gradual sort of thing, and for that reason we made only a very small allowance for it. As a matter of fact, you remember in the report that we stated that although at the present time approximately three out of four cars used the Clark's Ferry bridge route rather than the shorter route, that in our estimates we have considered that only from 10 to 20 per cent. of the traffic which could more advantageously use the short route, will change their habits and use it.

Q. That means about how many cars a year. I will refresh your recollection by saying it is 27,000 in 1925?

A. That's right, about 27,000.

Q. Did you use that same number through each year of your five years?

A. We used that figure to determine the basic 1929 traffic. We reduced the figure which we had, by 27,000, and then the result was extended through the other years, so that reduction would have a slightly increasing effect during the later years.

Q. That map you have read the route numbers from is the map of May 30th, is it, just so that the record shows what map we are talking about?

A. 1930, yes, that's right.

MR. HULL:

Mr. Cunningham, of the Bureau of Rates and Tariffs, of the Commission has produced Special Tariff of the Pennsylvania Railroad Company, numbered G. O.—P. S. C. Pa. No. 4704, which is a local freight tariff on dirt sweepings from limestone quarries in carload lots from Steelton to Clark's Ferry, effective not less than thirty days notice; by special order of the Commission the tariff was issued August 14th, 1924, and became effective August 16th, 1924, and specifies a special rate of seventy cents per 2,000 pounds. I may say that the purpose of putting that in the record is because there was some question of whether the rate was seventy cents before or after the special reduction was obtained. We want to show by this that seventy cents was the rate after special allowance had been made.

Q. In discussing the possible road improvements that might divert traffic from the bridge you mention as one the construction of the bridge from Millersburg to Liverpool. Have you any information showing that that bridge is seriously contemplated by the Department?

A. No.

Q. Just the bare possibility, and if it is, it will hurt you, that's your thought?

A. Yes, sir, that's right.

Q. How about the improvements on the west shore road from Duncannon south to Lemoyne. Do you know about the probabilities of that being done, or is that simply a bare possibility?

A. That seems to me to be much more than a bare possibility for the reason that I understand

from the Highway Department that surveys and detailed studies have been made, for the bypassing of Marysville, I believe that's the name of the town, where a bad under-grade crossing is.

Q. Anything else?

A. And also from my general knowledge of what would seem like good engineering on the part of the Department. That would seem like an improvement that logically ought to be made.

Q. Do you know when those surveys were made?

A. No.

Q. Where did you get this impression in the department, from whom did you get it?

A. From Mr. A. L. Ditmar, in the Harrisburg office of the department.

Q. Do you know what his position was in the department?

A. I don't know the exact title. His duties have to do with reviewing plans, which are presented to the central office by the division engineers.

Q. You don't know when they made up this plan, or made these surveys, do you?

A. No, I don't know the date.

Q. You don't know they have been making plans for that Marysville job, and have for the last five years?

A. No.

Q. You have no information as to whether it might not be another five or ten years before they really got down to building anything?

A. No, we didn't deem it our place to predict when these improvements were likely to occur; or what the possibilities were of their being done in the near future. It is our only purpose to consider

improvements, which would have merit, and which might be done in the reasonably near future, and to determine what the effect of this would be if the improvements were made.

Q. And when were you conferring with the men in the Department of Highways?

A. In March, 1930.

Q. March, 1930?

A. Yes.

Q. Do you have any information, or impression, as to whether the policies of the Department would be the same now as they were at the time these surveys were made?

A. Well, I understand from some sources, and from reading the newspapers, that the bills may be deferred.

Q. Would that tend to speed up this construction, or slow it down?

A. We are talking about a very nebulous sort of thing.

Q. I think your whole supposition is pretty nebulous. You have no reason to believe that this improvement is anything that's likely to hit the Clark's Ferry people in the near future?

A. No other than that it would be a good improvement to make, a sound project.

Q. You have the same general feeling, I take it, in regard to the road on the east shore from Millersburg to Sunbury?

A. No, certain portions of that project have been completed; others are under construction, I believe, at the present time.

Q. Certain projects and elimination of crossings at grade?

A. Yes, which, of course is a major item in the whole improvement.

Q. But, nevertheless, leaving very material portions of dirt road?

A. Yes, but I think the logical inference is that those gaps will be closed. The investment, which has already been made, and is being made at the present time, between Millersburg and Sunbury would not be justified unless the remaining gaps were closed.

Q. You understand that those jobs that are going on now there are not done by the Highway Department as road improvements, but are done by order of the Public Service Commission, as pure safety matters, do you not?

A. No. I think the whole matter is tied together with grade crossing elimination and road improvements. I think that is an attitude of the Highway Department, perhaps.

Q. Were you advised when you wrote your report that the Commission's orders in regard to a couple of these crossings, the orders followed very shortly after an accident, in which people were killed?

A. No, I didn't know that was true.

Q. I take it then it is your assumption, then it is your general understanding, that the Highway Department will continue to work on this road, and complete it, so that the whole road from Sunbury down to Millersburg will be concrete road?

A. Yes.

Q. That's your assumption?

A. It seems like a reasonable thing to expect.

Q. That is based as to reasonableness on your

ideas?

A. Yes.

Q. You weren't told that by anybody in authority?

A. No.

Q. You don't know whether the Department's policy in the next four or five years will be to improve the roads already existing?

A. No.

Q. As to the work on that west shore road in the vicinity of Kinkora Heights, will you just turn to your tables 2 and 3, and tell us what traffic you found would be affected. Start with table 2?

A. In order to give you these figures, I will have to refer to the tabulation where the effect of these different improvements is obtained.

Q. I have no desire to prevent you from referring to any information?

A. I just wanted to explain that. Table 2 is not complete in determining the effect of the other improvements. In table 2 you will notice that the probable actual traffic between the section marked between Meck's Corner and Clark's Ferry, operated by way of Duncannon, and between Clark's Ferry bridge and Harrisburg, is 17,700.

Q. Yes?

A. We have estimated that the effect of the improvement on the West shore road on that traffic will be zero.

Q. Yes?

A. In the next item, the interchange between Harrisburg and the area between Meck's Corner and Clark's Ferry bridge by way of Duncannon, we have estimated that the figure of 102,600 shown in the

table would be reduced 20 per cent by the improvement of a portion of the west shore road, the part now under construction.

Q. That's the part you refer to as an "A" item?

A. Yes.

Q. That's irrespective of any other improvement in that road?

A. Yes, 20 per cent reduction in the interchange of traffic between these points. For traffic east of Harrisburg, which is a relatively small item, we have also estimated that there will be a 20 per cent reduction by the improvements we were just speaking of. The next two columns show that the interchange of traffic is negligible. The interchange of traffic between route 209, in the vicinity of Millersberg and the area of Meck's Corners and Clark's Ferry bridge by way of Duncannon, we have estimated will not be affected at all by the improvements. So that taking that line in table 2, the first line, we estimate that the figure of 129,700, given in the last column, would be reduced to 108,600 by the improvement of a portion of the west shore road.

Q. Proceed?

A. Did you want me to go through the table?

Q. I want to check this 170,000 people you have got?

A. Coming down to the next line, with west of Meck's Corners, into the first column, the interchange of traffic under the heading between Clark's Ferry bridge and Harrisburg is given in table 2 as 1,800.

Q. Yes?

A. We have reduced that none at all. To allow for the effect of the west shore construction, in the

next column we have made a reduction of 50 per cent, so as to give an estimated traffic in 1935 of 23,300 instead of 46,600.

Q. Right?

A. Now the next column, headed east of Harrisburg, we have there made a 50 per cent reduction, giving estimated traffic in 1935, 1,800 instead of 3,600. In the next column we have made a reduction of 60 per cent from 1,800 to 720, 60 per cent being used because traffic which originates west of Meck's Corner, and is bound for some locality on the west side of the river, generally south or southwest of Harrisburg, will rarely take a round-about circuitous route across the bridge.

Q. They would be glad to for the total of 15 cents?

A. That's true. The next column, which is headed south of Dillsburg, carried negligible traffic, and the column headed route 209 is unaffected by the improvement on the west shore, so that the total—

Q. I don't care about the total?

A. The next line, south of Duncannon, in the third column, headed between Clark's Ferry bridge and Harrisburg, the interchange traffic was negligible. In the next column, headed Harrisburg, no change was made. As a matter of fact, no change was made anywhere in that line.

Q. All right?

A. The effect of the west shore road would be negligible. Next line, marked route 22, between Clark's Ferry bridge and south of Newport, the interchange from that section, route 22, and the area between Clark's Ferry bridge and Harrisburg, is

given in the total as 3,600. That has not been reduced due to the improvement. In the next column I had 9,900, that has been reduced 10 per cent, to 8,910. The next column is marked negligible, and in the next column, marked south of Harrisburg to north of Dillsburg, the figure, 900, has been reduced 20 per cent, to 720. The next column, the same figure, 900, is also reduced 20 per cent, to 720. The next column, the effect of the road construction on the west shore will be zero, and no reduction was made. Route 22, Newport and points north is marked negligible, and in the next column there has been a reduction of traffic to allow for the west shore construction, from 216,500 to 194,850. In the next column a reduction of 10 per cent was made, giving —or rather, a reduction of 20 per cent was made.

Q. That's the east of Harrisburg column?

A. No, you started with the column headed east of Harrisburg.

Q. Yes?

A. The line, which is marked in the first column, route 22, Newport, and points north of Newport, traffic includes both local and through traffic, and you will note in table 2 that only local traffic is included, so that it won't be error, in order to tie in the effect of the improvement of the west shore road, the figures given under that, it will be necessary to take both table 2 and table 3. Taking this line marked route number 22, Newport, and points north of Newport, in the column which is headed Harrisburg, the figure of 216,500 has been reduced 10 per cent to 194,850.

Q. Yes?

A. In the next column of the table, interchange

traffic, including both local and through traffic, is 193,000, which has been reduced 10 per cent to 173,700; and in the next column—

MR. HULL:

Where did you get those last figures?

MR. MATHER:

From table 3.

Q. That 193,000 is the 46,900 shown on this sheet?

A. Yes.

Q. Plus what item from the other sheet?

A. One hundred forty-six thousand, one hundred.

Q. You may proceed?

A. In the next column headed south of Harrisburg but north of Dillsburg, the figure of 1,440 has been reduced 20 per cent to 1,150.

MR. HULL:

Is that 1,440 or 1,420?

WITNESS:

I think that there this question of the effect of that road from Newport down to Carlisle comes in. This total estimated 1935 traffic figures, which consist of 880,700 for local traffic shown, is the total for table 2, and the 438,750 shown on table 3 as total through traffic in 1935.

Q. Yes?

A. As they are added together the total is 1,319,450. That is the figure which is shown on page 10 of the report, and which was obtained before the allowance was made for the increased use of the road from Newport to Carlisle, so that there won't be an exact tie-in between table 2 and 3 in the effect on those routes. However, you will be able to tie in with the figure given in table 10, repre-

senting traffic, an allowance has been made—

Q. In table 10 you show a loss as far as the Meck's Corners road is concerned. You show a further loss for the job now going on near Duncannon, totalling 170,000 vehicles a year. What I am asking you right now is where you make up that 170,000. So far you have made up a total of about 86,000 or 87,000 cars. Where's the rest of it?

A. I am about half way down the table.

Q. Let's have the other half, then?

A. I believe we were in the line marked route 22, Newport and points north of Newport, and had just covered south of Harrisburg and east of Dillsburg.

Q. Yes?

A. The next column the figure 35,440 is the estimated 1935 traffic, and that has been reduced 20 per cent to 28,350.

Q. That figure you have just given is the figure for local and long distance combined?

A. That's correct, and in the next column, headed route 209, the figure of 21,130 has not been changed.

Q. Again that's local and long distance together?

A. Yes. In the next line, marked route 11, between Clark's Ferry Bridge and south of Northumberland, in the first column, headed between Clark's Ferry bridge and Harrisburg, the figure of 4,700 has not been reduced. In the next column headed Harrisburg, estimated traffic of 63,600 in 1935 has been reduced 10 per cent to 56,440 to allow for the effect of the west shore construction. And in the next column, headed east of Harrisburg, the figure of 3,800 has been reduced 10 per cent to 3,420. The

next column is marked negligible; and the column headed south of Dillsburg, an estimated traffic of 2,610 has been reduced 20 per cent to 2,090; and the next column, headed route 209, would be unaffected by the construction. Take the next line, marked route number 11, Sunbury, Shamokin and vicinity, the column headed between Clark's Ferry bridge and Harrisburg is marked negligible. The next column, headed Harrisburg, shows a reduction of 10 per cent from 65,400 to 58,860. The next column, which is headed east of Harrisburg, includes a 10 per cent allowance for the west shore construction, reducing the estimate from 24,200 to 21,780. The next column is marked negligible. The next one, headed south of Dillsburg, shows a 20 per cent reduction from 6,660 to 5,330. The next column, headed route 209, no change. In the line marked route 11, points north and northeast of Northumberland, the first column is marked negligible. The next one, headed Harrisburg, shows a 10 per cent reduction due to the west shore construction, from 117,200 to 105,480. The next column, headed east of Harrisburg, also a 10 per cent reduction from 120,400 to 108,360. The next column, headed south of Harrisburg, and north of Dillsburg shows a reduction of 20 per cent. Here again the effect of the west shore construction is more pronounced in the case of traffic, either originating or bound for points southwest of Harrisburg. This 20 per cent reduction makes the figure 2,810, as compared with 3,510 before the reduction was made. The next column, headed south of Dillsburg, also shows a 20 per cent reduction, from 150,390 to 120,310. The next column shows no reduction.

Q. Those last two are both local and long distance?

A. That's right.

Q. And that brings your total to 170,000, does it?

A. 170,000, it's very—

Q. That's your table 14, isn't it, about 168,000 accurately?

A. For 1935, that's right.

Q. This bridge at Clark's Ferry is located on the William Penn highway, isn't it?

A. Yes.

Q. It's also located on the Susquehanna Trail, isn't it?

A. Yes.

Q. And they are both nationally known highways, aren't they?

A. Yes.

Q. And it's also located where the large part of the Lakes to the Sea traffic would also go over?

A. I am not sure about that, whether traffic coming down the Lakes to the Sea highway, and points bound for in the south, I am inclined to think—

Q. Where does the Lakes to the Sea highway go, east or south of Clark's Ferry. It goes to Philadelphia, does it not?

A. I don't believe so.

Q. Suppose you take a look at the map you have there. Doesn't that show the Lakes to the Sea highway going down through Ephrata, Downington to Philadelphia?

A. Yes, that does show the Lakes to the Sea highway; but, regardless of the name of the road, traffic bound for points in the south, and originating

from points in the north part of the State would not go by way of Philadelphia by the Lakes to the Sea highway.

Q. Where would the Lakes to the Sea traffic go?

A. It depends on what you mean by Lakes to the Sea traffic.

Q. I am talking about traffic on the Lakes to the Sea highway?

A. Traffic originating on the Lakes to the Sea highway?

Q. I would not be particularly interested in where it originated. The Lakes to the Sea highway is nationally known as going in the general direction of Philadelphia and thence to the south?

A. If it followed the Lakes to the Sea highway. A large part of that traffic would tend to go down, and over Clark's Ferry bridge, even though the bridge is not on that route as it is legally known.

Q. You want to be understood as saying that future traffic to traverse over the main highways in the country is not going to increase within the next five years without any greater speed than is the registration of vehicles all over the state of Pennsylvania?

A. No, that is not true. In estimating the increase in through traffic, we considered the probable increase in automobile registration in New York state, in Maryland, in Jersey, and the country as a whole. We determined how much of the through traffic originated at points in Pennsylvania, how much of it originated in New York state, and how much of it originated in other states, and weighing the probable increase in registration in these different areas, we determined the figures, 30 to 35%,

which are shown in table 3. As a matter of fact, about half of the through traffic was Pennsylvania traffic.

Q. What percentage of increase do you give to the local traffic?

A. That percentage varied as shown in table 2.

Q. Don't you state somewhere in your text—I don't know the exact location—something about 32 per cent?

A. I don't recall that.

Q. Isn't it on page 8, the latter part of the first paragraph?

A. Yes, that's the estimated increase in automobile registration for the area of one hundred miles.

Q. For your through traffic you gave us 30 to 35 per cent, the 30 per cent being the larger of the two kinds of traffic, so your total for through traffic is just about an average increase of 32 per cent, or thereabouts, isn't it?

A. Yes.

Q. For both traffics you gave them an increase just about proportional to the increase in registration, didn't you?

A. No, that is not true, because the estimated increase in local traffic is something under the 32 per cent, which you refer to. Due to the fact that some of the larger items of local traffic are estimated to increase at proportionately lower rates than the average increase in registration for the whole area, estimated at 32 per cent, but it doesn't necessarily follow that the estimated increase in traffic will also be 32 per cent.

Q. Down at the bottom of page 8, let me read

you what you have in your report: "The normal local traffic across the bridge in 1929 has been increased, therefore, by percentages which represent the probable increase in registration in the section?"

A. Yes.

Q. Didn't you state there flat-footedly you have increased your local traffic directly in proportion to your increase in registration for each area?

A. Yes, taking each area separately, that's important.

Q. In what way?

A. Because the increase in registration is not uniform throughout this large area. We average the increase as 32 per cent, and if it should so happen that the bulk of the traffic comes from areas where the average increase in registration is smaller than the average, then the adding up of the separate items of traffic, the total may represent a smaller increase than the estimated increase in registration throughout the whole area.

Q. What does that sentence mean, which I just read?

A. That question means that each— I would like to read that: "Normal local traffic across the bridge in 1929 has been increased, therefore, by a percentage which represents the probable increase in registration in the section which contributes the particular portion of the total traffic." That is, each section was taken separately; the traffic was increased in proportion to the estimated increase in registration, and those estimated percentages of increased registration, varied in the different sections. Then the estimated traffic from each section was added, giving the total estimated local traffic in

1935.

Q. Then your local traffic, as estimated, is directly proportional, as far as increase is concerned, to the increase in registration in each of the several districts that supply Clark's Ferry bridge with its local traffic?

A. That's right.

Q. That percentage comes out to about 32 per cent, as you stated here?

A. The increase in registration, yes. The increase in traffic, I believe, is somewhat less than 32 per cent.

Q. And for through traffic you have estimated an increase of about 32, or some such percentage?

A. Yes.

Q. Do you know how the areas you refer to here as producing this 32 per cent increase in registration, compare with the entire state?

A. Yes.

Q. Are they above or below the average?

A. They are above. The estimated increase for the whole state was 30 per cent, and for this area, 32 per cent.

Q. You didn't find the Highway estimate of traffic in this vicinity work out in accordance with your figures at all?

A. Not for the particular roads where we counted. The traffic increased much faster than the registration during the years from 1925 to 1929 on account of the effect of the road improvements.

Q. I show you a sheet of cross section paper, marked Plaintiff's Exhibit C-4, and having in mind your own final table, or plot, in your exhibit, and looking over the numbers in the margin, is not that

exactly the same graph you plotted in your exhibit, with the exception that it is put on an arithmetic section paper instead of a logarithmic projection?

A. I would have to check the points.

Q. Suppose you do check the points, then?

A. Now, what was the question?

(Question repeated).

A. The curves are the same as shown on our plot, which was referred to, with the exception of one point, which is off only a very small amount, and is immaterial.

Q. You checked that against the figures in your table?

A. Yes.

Q. Had you been checking that curve on logarithmic paper, could you have told any difference?

A. Probably not.

Q. Why did you put yours on logarithmic paper?

A. Because a logarithmic cross section sheet shows up a curve in such a manner that the slope of the curve indicates the rate of increase. That is not true of arithmetical cross section paper. That is, a constant rate of increase will show up as a straight line in logarithmic paper, where a constant rate of increase on arithmetical paper will curve upward.

Q. You mean a constant percentage of increase?

A. Yes, or rate, and, therefore, it is good engineering practice, and a long established practice, to plot population curves and things of that nature, on logarithmic paper, for that reason, that a straight line represents the constant rate of increase.

Q. But it's also subject to the criticism that when you get up into this part of the sheet, it's im-

possible to read the curve very accurately?

A. Yes, but on the other hand, in making an estimate of this kind, you were not justified in reading a curve as accurately at the upper end, as you are below. Your likelihood of error increases, and I would like, if I may, to explain another reason why logarithmic paper was used. You will notice on our plot all curves showing the future estimates under different conditions are parallel, that is, the curves for 1935 traffic, when the highway interchange was first completed, and then the other curves were made parallel with that upper curve. It would have been impossible to do that if the arithmetical paper had been used.

Q. They are not parallel on arithmetic paper, are they?

A. No.

MR. MATHER:

I will offer the exhibit C-4, as it is now known, at this time.

MR. HULL:

We have no objection, but we would like to be furnished with a copy of it at the proper time.

(Received and marked exhibit C-4).

MR. MATHER:

That's all the questions I have, unless the Commissioner wishes to ask any questions.

THE COMMISSIONER:

No.

MR. HULL:

I have no questions at this time, on redirect examination. I have asked Mr. Jupenlaz to go to the Highway Department, and make investigation of

several matters. I am prepared to go ahead with the cross examination of Mr. Curry, and then have him give me the result of his inquiries after that.

THE COMMISSIONER:

All right, you may do that.

LYNN B. CURRY, resumed

Cross Examination

MR. HULL:

I should like the record to show that in response to the request of Counsel for the Commission at the last hearing, I have obtained from Mr. P. B. Johnson, of the American Appraisal Company, the data respecting the Columbia-Wrightsville bridge, which Counsel asked us to produce, at the last hearing.

MR. MATHER:

I would like to state on the record that I have examined the sheet, and I find that the items in regard to reinforced steel, which Mr. Johnson said he had before him when he made up his figures, although he didn't consider them comparable, are exactly the same as the figures which are on the sheet, which is officially in the files of the Commission, the bridge having been built under an order of approval from this Commission.

MR. HULL:

Q. Do you know it to be the fact that the contract for the construction of the Clark's Ferry bridge was executed on June 10th, 1924?

A. I don't at this time know that to be the fact. I know it was about that time and I know that the

date is shown in the record now.

Q. Have you in your working papers the date of the Clark's Ferry bridge contract?

A. No.

Q. Have you at any time had that date?

A. I don't know at this time whether I have or not.

Q. If you don't have it now, the probability is you never had it?

A. I can't recall at this period whether it's in our papers or not.

Q. You have recently given considerable attention to this matter and prepared certain estimates, and in the work that you have done respecting this present proceeding, you did not have before you the date of the Clark's Ferry bridge contract, did you?

A. Not definitely the date.

Q. Did you know that, as a matter of fact, there was a period of some time between the awarding of the contract to Vang Construction Company, and June 10th, 1924, when the contract was actually dated?

A. Yes, I had knowledge that some space of time elapsed there, because I know when the letting was, and I knew approximately by observing myself when the work began, and knew of this contract, not from the work that I have done in this case, but I knew of it at the time.

Q. Then it is the fact that there was a period of at least a month between the time when it was determined that Vang Construction Company should build this bridge, and the date of the contract, June 10th, 1924?

A. I can't swear that's a fact, but from what I

saw of the operation and of the time of letting it, it appears reasonable.

Q. During that time Vang Construction Company employed themselves diligently in making preparation for the work, did they not?

A. I have no knowledge to believe but what they did; but I have no direct knowledge, only as it appeared later they must have done so, because they began work at a certain time later on.

Q. You know in the ordinary course of a job of that kind, the preliminary work must have been done before?

A. Yes, sir.

Q. Do you know the date fixed in that contract for completion?

A. I did know one time. I don't know now.

Q. Do you know the period of time allowed for completion of the contract by that contract, between this date and the date of completion?

A. I don't know it. I would have to look it up.

Q. Was it not fifteen and two-thirds months from June 10th, 1924, to October 1st, 1925?

A. I might expect that's all right, I don't know.

Q. Do you know the bridge was actually opened to traffic in May, on May 30th, 1925?

A. I do.

Q. And that the Clark's Ferry bridge company paid a bonus for 147 days at the rate of $150 to the contractor for completing the work ahead of time?

THE COMMISSIONER:

Rate of $150 what?

MR. HULL:

Per day.

A. I don't recall that I could just exactly check that number of days, but it sounds all right. I have the figures here, if you want me to look them up.

Q. Turn to exhibit C-2, which I believe you prepared?

A. I didn't prepare that.

Q. I show you exhibit C-2. Are you familiar with that?

A. Yes, I am.

Q. It's been offered here by counsel for the Commission as an exhibit for the complainant?

MR. MATHER:

Not on Mr. Curry's testimony.

MR. HULL:

No, he says so.

Q. Is it not a fact that in the final estimate of the contractor, Vang Construction Company was paid a bonus of $150 a day for 147 days?

A. That's what this copy of the final estimate shows.

Q. In 1912 you were a masonry inspector on a barge canal near Rochester, were you not?

A. Yes.

Q. Your duties as such were to watch the laying of the concrete, the making of the mixture, and the manner of its installation?

A. And the incidental forms, and all matters concerned with the placing.

Q. You had nothing whatever to do with the cost of the materials in that work?

A. To some degree.

Q. To what degree?

A. The cost data kept by the New York state engineers was, of course, obtained on a voluntary

and mutually agreeable basis with the contractor. In that connection I had the duty of inspector, and to obtain for the district engineer and report to him certain items of such cost, and men hours used, and the days of work. I don't mean to say that I took all of that data, because there was a certain man assigned from the office when it was impossible for me to do that and my other duties also.

Q. By whom were you employed on that job, the contractor or the state?

A. New York state engineers.

Q. What are they, were they engineers of the State of New York, or was that a corporation, a private engineering corporation, or what?

A. The engineers of the state, all being under the state engineers, in this instance the Barge Canal Division.

Q. This was a state project, was it, the building of this canal?

A. Yes.

Q. A New York state project?

A. Yes.

Q. You were employed by the State of New York?

A. That's right.

Q. Was the work being done directly by the State of New York, or through a contractor?

A. Through a contractor.

Q. You were on the job as the representative of the state?

A. Yes.

Q. You were to report to your superiors what information as the result of your inspection?

A. The inspection of the work done, which I

will not go into in any further detail, and in addition thereto—

Q. I want to know the details. I want to know what you had to do, just exactly?

A. I had to be present on that job when masonry was being placed, as to the preparing to place it, and actual placing of the concrete, or other masonry aggregates, or materials, and report on the thoroughness of that work, in accordance with the specifications.

Q. Now, the specifications provided first the kind and quality of the materials, didn't they?

A. Yes.

Q. And you were to see that in the masonry, in the concrete, the proper preparation of materials was used, as the specifications provided?

A. Yes.

Q. And did you have anything to do with the testing of the materials, or was that done by somebody else?

A. That was certified by the testing laboratory.

Q. The cement came to you tested, but the stone came to you after being certified to by some other inspector, or did you have to inspect that?

A. I had to inspect it to see that it was in conformity with an approved stone that had already been approved for the contract. That was done rather in blanket, except that the material being individually bought, the approval had already been given by the District Engineer whom I worked under.

Q. Was that true also of the sand or gravel?

A. Yes, it is true. There was a large part of it gravel, Niagara gravel from Buffalo.

Q. With respect to the mixing of concrete, your principal duty was to see that the proper proportions were used?

A. I would say that the most important part was thorough workmanship, other than the incident of seeing that the materials conformed to a basis already laid down.

Q. The quality of the materials had been determined before they came to you?

A. In a general way you identified them as such.

Q. One of your duties was to see that the proportions were proper?

A. Yes.

Q. Next, after seeing that the proper proportions were used, you saw that the material was mixed in a workmanlike manner?

A. Proper handling.

Q. Next, it was conveyed from the mixer to the place where it was to rest, in a proper manner?

A. Yes.

Q. Did you keep track of, and survey, all the total quantities used each day, was that part of your work?

A. The count of materials put into the structures, yes.

Q. Did you also keep track of the number of men employed on the different operations?

A. Yes.

Q. And report that to your superior?

A. Yes.

Q. And the number of the different classes of labor that were used?

A. Yes.

Q. That was your work all day, was it?

A. Yes.

Q. Whereabouts, in that day's work, did you have anything to do with costs, either of materials or labor?

A. The labor.

Q. All you reported was the quantity of labor, wasn't it, the number of men in each class that were actually on the job?

A. On each day the labor rate didn't change. I had to determine what the labor rate was, and that was reported, along with the men hours of the different classes, and checked it also with the book keepers.

MR. MATTHER:

Q. What different classes would you report, so many men at fifty cents, or so many men of such a kind?

A. Both.

MR. HULL:

Q. What did you have to do with the cost of materials?

A. Not a terrible amount with the cost of materials in that particular job, because

Q. Did you have anything to do with it at all?

A. Yes, I had to do with the delivery between the contractor and my superior of the various costs for the materials that went into the concrete, not all of them. Some of them were delivered direct by the contractor to my superior, sometimes. I had the duty or privilege, which it might be, to deliver these. At times, the material man, or stock man, as he is sometimes called, would convey it through me, and it was one of my duties to accept them if he gave them to me. Sometimes I was asked to

get them directly by my chief, where it had not been delivered properly, or promptly; or investigate any points that were not understandable in such information as had already been delivered to my chief. It's only fair to say that that was my initial position as masonry inspector, between my Junior and Senior year in college.

Q. I understand, that's a matter of record. In 1913 you were engaged on a water supply project for the operation of a canal, were you not?

A. Yes.

Q. And as masonry inspector of the Hinckley dam reservoir?

A. Yes.

Q. Were your duties as masonry inspector there substantially the same as those you have described as having been performed the preceding year?

A. In general, yes, not specifically. The work of the preceding year was comparatively small. This latter job you mention was a much larger project, and was continuous, day to day, all through the construction period. There was a high degree of division of responsibility, and it was delegated to me specifically to be masonry inspector on the night shift—I have forgotten now—but five or six o'clock in the afternoon, for eight hours.

Q. When you say it was a good deal bigger project, you mean the total of the job was bigger, you don't mean to say a bigger day's work?

A. Very much bigger, but not in time, however.

Q. What did you have to do on this job you didn't do on the preceding job?

A. I had to apply myself entirely for eight hours continuously in inspecting the forms, the placing of

material, and the completion of the work that had been placed before and set up.

Q. So you didn't have time on that job to make the cost reports you referred to in your previous job?

A. That was so systematized that a lot of it came into my hands. I didn't have to do near the amount of detail I had to on the previous job. The division of work between the engineers was clearly marked, and just as an example, I will state that I had nothing to do with passing on the materials that went into the mix, but I did have to do with the mix as it came to the place, and that's—

Q. You had nothing to do with the cost of materials that went into the mix?

A. No.

Q. You had nothing to do with the cost of the labor employed in making the mix?

A. Not so far as determination went, or report, but it was always the job of the whole corps to work at cost data, when weather conditions were such on the job that the work just shut down temporarily, and that was true in the late fall when the construction period closed, so that no more work could be done in that section. That's a very cold section of the country.

Q. From 1914 to 1920 you were employed by the Interstate Commerce Commission?

A. Yes.

Q. You were a chain man in the field?

A. Not for all that time.

Q. The first part of that?

A. Beginning under that.

Q. It was your duty to do some part of the work

of making up inventory of the property, wasn't it?

A. Yes.

Q. And you and others associated with you went over the property, made your observations, your field notes of the property, making up an inventory of the property. That was your duty as a chain man, was it?

A. The facts are that the inventory was made as we went, right in the field.

Q. You later became an engineer, grade 2. How did your duties as such engineer differ in the field from your duty as chain man?

A. I worked with the same outfit, but they were in no wise alike in the character of duty.

Q. Were you working for the same purpose for the same end?

A. For the same purpose, not for the same kind of purpose, but higher studies in the purpose.

Q. You were employed for the same purpose, making up an inventory of the property?

A. As I said, it was not just an inventory. We gathered cost data in large volumes.

Q. Of what character?

A. Actual cost, final estimates.

Q. Cost of what?

A. Construction work of the railroad we were engaged on in making inventory.

Q. Whereabouts in the war were you connected, what railroad were you valuing?

A. I clearly remember the first name, the Boston and Maine Railroad.

Q. Did you have anything to do with getting the cost data of steel for that railroad?

A. Steel rails, yes, short span structural steel bridges.

Q. Did you get that in the field?

A. In that particular case that was covered in the office of the company in South Station, Boston.

Q. What they had actually paid for the steel?

A. Yes. Perhaps I might give this explanation. While this work was done by the field party, and we did what is strictly field work by engineers, it was also found that a lot of this field work was in the office, and some of the work was done in the office, gathering data.

Q. Thereafter you came back to Washington, and spent about three months clearing up your work, and making detailed statements of your field notes?

A. That's just following the closing of the field period that's been mentioned, and although I didn't get the rating for a short while at the end of the field work I was the chief of the party, and closed out the work of the party as acting chief.

Q. What do you mean by making detailed statements of your field notes. By that do you mean assembling and formally making up your inventory, completing it, or what do you mean?

A. What do you refer to?

Q. I refer to the statement made in your testimony, that you were engaged in Washington for three months making detailed statements of your field notes?

A. With regard to my work in Washington?

Q. Yes, just what was that?

A. That's compilation and elaboration from those field notes, in a manner which I, of course, being more familiar with that, would be able to do.

That is the reason why they were assigned to me.

Q. I understood you to say a moment ago that you completed your inventory in the field?

A. Summaries and compilation followed in the Washington office. Inventory in the field meaning a listing by numbers and descriptions in the field office, computer, which position I held for part of my time between 1914 and 1920, compiling the quantities. Then I went to Washington, and all the forms were summarized, and in the case of special structures, where plans and estimates were available, they were field checked as to accuracy, and then sent in with complete quantities, or listings of any description to be taken off in Washington. All information was complete, and checked.

Q. I think maybe you and I have had in our minds a little difference, a different idea as to what constitutes making an inventory. You have your field notes, which included a list of all quantities, and that information was sent to Washington. Then afterwards when you—

A. Yes.

Q. And after you got down to Washington, you took the field notes that had been taken, and you compiled these into the orderly and complete inventory of the property?

A. That's one of the things.

Q. That's what you have referred to here as the summaries of your field notes, isn't it?

A. Yes, but that's not all my work in Washington.

Q. In addition to that, in the eastern district, you were engaged in some compiling of inventories, is that right?

A. That's right.

Q. And that consisted of attaching to certain items of inventory the unit prices for those items?

A. Yes.

Q. And did your work end there?

A. Those prices just mentioned were determined in general as applicable to the railroad inventory on which I worked, and might be working at any time, so that there was the engineering work, and consultation with the cost engineer, based on the cost data, that went along with the inventory which I have already mentioned, to make a determination of what the unit prices for various items of construction would be. By that I mean it was not merely the attaching of prices that had been determined by somebody else for you, although sometimes I had that to do also.

Q. When you had completed the summaries of your inventory, and when you had completed the pricing of those units that you had inventoried, you were through, weren't you, all through your work?

A. No. The compilation not only included what you have specifically mentioned, but it included the final summary, and the application of the overheads and the miscellaneous expenses of all of the departments, all of the items determined by schedule.

Q. Were your overheads determined by schedule made by your superiors?

A. Yes.

Q. And handed to you?

A. Yes.

Q. You applied those to the work that you had inventoried and priced?

A. Yes.

Q. For five years you were with Gannett, Seelye and Fleming as civil engineer, engaged in contracts, or as resident engineer in some waterworks structures, what did you have to do during that period with costs?

A. That job, that covered that period, was handled by me completely as far as responsible charge was concerned. It was not only general reports being made to my superiors, and following designs and writing of contracts, which I handled, but it was determined by that price, the work was done on a cost plus basis, and I handled the whole cost of the work, the whole cost work, and turned in the accounting of it.

Q. Were you engaged those five years on one job?

A. No.

Q. You spoke of one job?

A. The one job covered the period you just mentioned in your question.

Q. I referred to the period of five years, and you referred to one job?

A. Your query and my answer was with regard to the one job, and the one you mentioned in connection with that time.

Q. I understand from your direct testimony you have been engaged during this time as construction superintendent in the construction of various water works?

A. That's at a later period than you mentioned.

Q. You were not so engaged during all of the five years?

A. No.

Q. This one job you spoke of, in which you were

a construction superintendent, and solely responsible, was a cost plus job?

A. You misquote there.

Q. I don't intend to?

A. You say construction superintendent. You mentioned a few moments ago I was resident engineer in charge. In making my explanation, in my response to your question, I referred to the period of employment with Gannett, Seelye and Fleming, and that so far has been with reference to your question about when I was a resident engineer, a certain time.

Q. You were in charge of construction at one time. That was on a cost plus basis, and you were resident engineer on that job?

A. That's correct.

Q. On what work were you construction superintendent. Were you resident engineer on any other projects?

A. Yes, but not solely, having the advice of the resident engineer. In several instances I was designing engineer, construction engineer, resident engineer, and superintendent at successive periods and overlapping, in work that by its character had to be handled in that fashion.

Q. These were contracts on which Gannett, Seelye and Fleming were the contractors, were they?

A. They called themselves Constructors.

Q. They took the contract with the owners to produce the finished work?

A. They had contract agreements, but not on the basis of unit prices.

Q. They were the people that took the materials

and fabricated the work?

A. They were the builders.

Q. You had to do in that work principally with the construction, did you not?

A. In all but one of those I personally handled all the matters of cost and cost data. In the one exception I had a man working under me that did it under my supervision.

Q. What did you have to do, if anything, with the accounting for cost, which was done in the office of your employer?

A. There never was any work of accounting of any kind on any of my jobs done in the office of my employer. I did them all in the field, and turned it in complete.

Q. Gannett, Seelye and Fleming then had, and still have a large organization employed in their office, do they not?

A. Yes.

Q. Did you have anything in the field to do with the determination of the cost of running their office, and the part of it that was applicable to each job?

A. Certain instances, where I was consulted previous to the taking of these contracts, I had a part in determining the proposal of the company, and later on, both in the place where I was consulted, and where I was not consulted, the bills all came for my O. K.

Q. You would not have anything to do with the contractor's overhead, when you were out in the field, as to his office overhead?

A. Home office you refer to?

Q. Yes?

A. No, in determining it I would not, but in the

knowing of it, and the handling of the bills rendered for such items, I handled them just the same as I would any other contract for materials.

Q. Have you been engaged at any time for the owner of an enterprise from the time that the project was originally conceived, through the stages of promotion and organization, writing of contracts, actual consummation of the work, completion of the contract, and final determination of the total cost, and if so, where and when?

A. There are so many that I have been in with stages that almost approximate that, I could not answer that without a little thought.

Q. Since 1925 you have been employed in the Bureau of Engineering of this Commission?

A. Yes.

Q. And of course during that period you have not been engaged in the promotion or organization of any construction work, have you?

A. Not so much. I have observed it going on.

Q. So that for nearly twenty years your experience as an engineer has been in the making of inventories, presenting of the same, the actual construction work, and the application of such overheads as somebody else determined and furnished to you, isn't that true?

A. The very last part is not true, the application of overheads determined by somebody else.

Q. You told us when you were with the Interstate Commerce Commission that's what you did. What other experience have you had in determining overheads?

A. Together with my construction experience with Gannett, Seelye and Fleming, I made many in-

ventories and valuations where the whole inventory and valuation procedure was in my own charge, and sometimes with an assistant, however. In those cases, overheads were determined by myself, and the basis for the determination was studied and obtained by available records.

Q. How many valuations were you engaged in for Gannett, Seelye and Fleming?

A. I would have to have time to count that up.

Q. Approximately?

A. Shall I start to name a few?

Q. No, tell us approximately?

A. In my opinion, as best I can say, there must be eight or more that I handled completely by myself.

Q. What was the largest one of those?

A. I expect it was the gas, electric and water company which I have forgotten the exact title of, in Brunswick, Georgia.

Q. About how large a proposition?

A. Without remembering at all what my figures were, but just thinking of the property itself, I expect it was about between $2,000,000 and $3,000,000.

Q. Were you at any time called into consultation by the promoters, developers, or prospective owners of a utility company, or other industrial enterprise, and asked to join with them in planning for the promotion, the organization, the raising of the money, the issue of the securities, on all of the necessary stages of development between the conception of the original idea and the final completion of the work?

A. No, because most of the work that I have done there has always been the initial stages com-

pleted, and when you asked in your question along this line, asked me if I have ever started with the original, that has been the one item that has caused me to answer no. It's usually a reorganization, or further promotion that has come under my consideration. I was through such an operation with regard to the waterworks in Spangler, where I had two years of construction work, intermingled with management, control, reorganization, and all of those items.

Q. When were those two years?

A. 1921 and 1922.

Q. While you were with Gannett, Seelye and Fleming?

A. Yes. The construction work in those two years is some that I have already referred to as being construction superintendent, cost keeper, and all of the items that went with the work.

Q. That was a developed property before you went there, however?

A. Yes, a very old company had to be reorganized, and had to develop a new source of supply.

Q. It is true that what work you have done as an engineer, it's been after the development periods had passed, and the company was ready for reorganization, and so forth?

A. Literally, I now recall two instances where I started corporations, but it would not be responsive to your question, because they were only formed for the purpose of being subsidiaries to another company, and soon went into the parent company. I had quite a large number of jobs with reorganizations, further promotion, and the work along that line, but as to starting a new company, I think

there's none, except just such instances as I have just mentioned. They are all typical examples of what you refer to.

Q. I direct your attention, Mr. Curry, to the item in your valuation, Complainant's Exhibit No. 3, interest during construction. You have allowed $22,000. Will you tell us what was the basic amount on which you computed that interest?

A. $22,000 is an allowance.

Q. What did you base it on, this interest during construction; I want to know what is the basic figure on which it is interest?

A. A figure of money?

Q. Yes?

A. It is not such a figure.

Q. You mean to say that you have not used any basic value in money as being the amount on which the company would be entitled to interest during construction?

A. They were entitled to interest during construction on every item in my valuation preceding interest during construction.

Q. Tell us how you figured that interest during construction?

A. That involves the assumption of a construction period, which in this case was one year.

Q. We have the period, one year. What else does it involve?

A. It involves a consideration of how payments must be made along the period of one year to meet the requirements.

Q. Payments of this money?

A. Yes.

Q. Tell us what assumed payments of money dur-

ing the year constituting the construction period you used as a basis for your computation?

A. The organization, the promotion for the work, would be all paid at the beginning of the construction period, and therefore would require interest for the full one year.

Q. Promotion and organization, $8,000, for one year. What's your next item?

A. The land items are all items that come early in construction.

Q. They come, when you say early, they come at the beginning?

A. At the start.

Q. Before the beginning of construction?

A. Yes.

Q. So that we have the first item, Bridge Head Lands and Clearing Right of Way, amounting to a total of $19,812, for one year, is that right?

A. That's not exactly true, including clearing the site there, that's part of the construction work.

Q. Did you, or did you not include it in the figure of $22,000?

A. I didn't dogmatically consider it that way at all.

Q. I want to know now whether you included it, or didn't include it?

A. I included an item to cover interest during construction, covering every one of those items mentioned in the exhibit.

Q. I want to know with respect to each item, how much you used as a basis for your computation, and over what period you allowed interest on that amount?

A. I didn't use that as my basis.

Q. Did you allow interest on $11,350 for one year?

A. I didn't allowed it in that manner, but it's included in that figure of $22,000 allowance for interest during construction.

Q. What do you mean by saying that you allowed it, and you didn't allow it?

A. It is covered, but I made no computation of allowance.

Q. What do you mean by saying you didn't allow it, and yet it's covered?

MR. MATHER:

He didn't say that.

MR. HULL:

Q. How did you allow it, and to what extent did you allow it?

A. I have already pointed out to you items that have to be paid for at the start of a construction job. There are remaining items, which come up for payment during various times in the construction period. It was considered by me that land, promotion, organization, would have interest charges for the complete period. It is also considered by me that in the payments to the contractor for construction work, 15 per cent is usually retained. I point that out in that way, because that is an offsetting item, and in order that it may be better understood, having gone through such a process of reasoning and consideration of this interest during construction, with such offsetting items, as that amounts to, I found about 3 per cent of the items preceded the item of interest during construction. I didn't compute it at three per cent, but that's what it is.

Q. The two things I want to do, Mr. Curry, and

I want to do them in the most expeditious way, if I tell what is in my mind, maybe we can get it quickly. First, I want to know just exactly, not as a matter of guessing, I want to know just exactly how you arrive at $22,000, rather than $20,000 or $23,000, or $21,500. That's number one. After that, I want you in detail with me to compute the interest during construction on the items here, item by item and period by period, and the rate, so that we can see what this interest during construction period ought to be. We will take the first one, you tell me just how you arrived at the $22,000, rather than $1,000 or $1,500 less or more?

A. I will not repeat the details of the reasoning that I mentioned concerning the items that were to be paid at the beginning, right at the start of the construction job.

Q. I had promotion and organization and land, and what else?

A. You had included clearing the site, but I disagreed with you, that should not be in.

Q. I deducted that sum of $11,350, for land alone. Would you include any part of the clearing of the site?

A. No.

Q. No part of that?

A. No.

(At this point a luncheon recess was taken until two o'clock P. M.)

(Last two questions and answers repeated.)

Q. What other items are there on which you allowed interest throughout the entire construction period?

A. Promotion and organization.

Q. That you had already given me, $8,000?

A. Yes.

Q. And land, $11,350, are there any other items?

A. No.

Q. No others?

A. No.

Q. Taking the group of items under the heading of bridge structure, items Number 1 to 21, and some miscellaneous items in addition, how in your allowance did you contemplate the payment for those items?

A. The correct number of items is 20, instead of 21, 20 and miscellaneous.

Q. That's right?

A. Payments would be made in accordance with the contract, which would anticipate a certain retained portion, and—

Q. What would be the retained portion?

MR. MATHER:

Please let him finish.

A. The completion of pay items under a contract of this sort would not be expected to commence at the first day of the contract. In other words, there is a span of a period in the beginning of construction period before a contractor may produce any appreciable amount of pay items. Likewise, at the end of the construction period, there is a space of time, after he has completed the bulk of the pay items, in which he has little or no amounts of monthly estimates or pay quantities coming due in that space. It is very reasonable to be assumed to be somewhat comparable in magnitude, the space of time that it takes to get pay quantities in the early

part of the construction period, and the space of time near the end, where there's very little coming due, until the last payment of the retained fee, because it is due at the date of completion. The retainer is held out, sometimes 15 per cent, hardly ever less than ten, and the contracts many times provide for payment toward pay quantities of material delivered, so that is the general situation, about its equivalent, to have the payments comes due quite uniformly over the period, and in the construction period of one year, with interest at the rate of six per cent would be equivalent to one year at three per cent, or six months at six per cent, average. Now in either case of 10 per cent or 15 per cent, the amount retained until the completion of the construction work, that amount would be in excess of the amount of the items that I have already designated as being paid for land and promotion and organization and having a proper item of interest during construction for the full period of one year. That means that one might reasonably expect that for a construction period of one year for this particular set-up we are considering, that interest during construction might be about three per cent. However, that's not the way I determined it. It is the way I checked it. I see from the records of this company, as already shown in this case in the exhibits, that the interest during the construction period experienced in 1924 was a little less than $21,000, $20,878.

Q. You are referring to what now?

A. I don't have the exhibit itself, but I have a notation here that the interest during construction was shown to be $20,878. That should check, unless

I have made an error.

MR. MATHER:

Q. To what exhibit do you refer?

A. I believe it's Mr. Keen's exhibit showing what's shown on the books of the company. I have knowledge also that certain portions of structure, that went into the present structure, were not built in 1924, but part of the old bridge taken over and utilized in the new structure; and I can see that no item for interest during construction was allowed for that.. My conclusion as to the amount for interest during construction was arrived at by the allowance in accordance with that line of reasoning, $22,000, and then it was checked by the total amount of all the items down to the line entitled, Interest During construction, on my inventory and valuation and estimate, and I find that it is approximately three per cent.

MR. HULL:

Q. If I understand you, you considered that the items of land and promotion and organization would have to be paid for before construction work was begun, and that as an offset there would be retained a percentage of 15 per cent of the construction work itself, which would not be paid until subsequent to the completion of the job, and you set one of these off against the other?

A. Of course, you know they do not exactly cancel.

Q. I understand, not to the penny?

A. That's the line of reasoning.

Q. That's the way you reasoned. It is the fact, is it not, Mr. Curry, that a great many contracts, and probably the majority of contracts now provide

for a retained percentage of ten per cent?

A. I don't know what proportion, but 15 per cent has been common, and there seems to be a tendency to reduce it.

Q. 15 per cent has been used in many contracts, it's true, but isn't it the fact that at the time with which we are dealing here, 1930, 10 per cent was the retained percentage in the majority of construction contracts, rather than 15?

A. As far as I know, yes.

Q. Notwithstanding that, your reasoning here is based on 15?

A. Either 10 or 15.

Q. Doesn't it make any difference in your computation of this item whether it is 10 or 15?

A. Not the computation of the items, but the amount by which the retained percentage will exceed the charges that have fallen due at the beginning of the construction period will only be greater if it's 15.

Q. The items on which a percentage would be retained would be what amount?

A. Approximately $650,000, slightly in excess of $650,000, and 10 per cent of that is $65,000, and the items of land and promotion and organization in round numbers, $19,000.

Q. What is this pay, delayed at the end of the contract, you spoke of?

A. Clean up, and getting the matters all completely finished, which takes a period preparatory to the time when the contractor can deliver the job to the owner.

Q. Isn't it the fact that with this job, starting on the 10th of June, 1924, or that being the date of

the contract, that the contractor was entitled to payment for a monthly estimate at the end of every month from that time on until the job was completed?

A. Yes.

Q. And at the end of the last month he would have a monthly estimate just the same as he had on each other month, aside from the percentage that was retained, isn't that true?

A. Not just the same, because—

Q. Not the same in amount, but there would be a monthly estimate?

A. That's the point. I think that would be very small.

Q. How long do you think it would take, as you say, to clear up the job?

A. I should say six weeks, at least six weeks, a period when that's all you would be doing, taking away plant, and getting it done.

Q. What would that clearing up consist of?

A. Everything after the work of placing the items in their final resting place in the structure had been completed, the lumber, plant, waste, all kinds of refuse.

Q. Would that include taking down the forms, which had been used to pour the piers?

A. I expect that that would have progressed far enough before that period. They would be removed, because the last item to be placed in final position would be the railings, and miscellaneous appurtenances to the bridge, and the lights.

Q. While they were putting the finishing touches, and putting up the lamp posts, they would be doing this cleaning up you speak of, wouldn't they?

A. Yes, but not necessarily all through. There's still some remaining.

Q. You have said after that, after all the clean up work that's done during the progress of the job, there would be a period of six weeks after this job was completed, which it would take to clean it up and turn it over to the owner?

A. Yes, maybe a short period.

Q. Have you ever known a construction job comparable to this that took six weeks to clean up?

A. I have known plenty of them smaller than this that took almost that long. My statement of six weeks is surely a minimum.

Q. You have not made any inquiry to find out in this particular case what that period was, have you?

A. I did to a certain extent. I knew about it one time how that was, but I don't recall now.

Q. Why do you compute interest at the rate of six per cent?

A. That's the proper rate of interest.

Q. You think that's the proper rate?

A. I do.

Q. For a construction project of this kind?

A. Yes.

Q. Do you know anywhere where the Clark's Ferry Bridge Company could have gotten money at that rate, as of the time of making this valuation?

A. I don't know whether they could, or not. I think I could.

Q. You could?

A. Under the circumstances.

Q. You mean you could have borrowed half a million dollars for the construction of this bridge?

A. It's already provided for in financing.

Q. What do you mean by already provided for?

A. I mean the arrangements for the bridge to be built, and go into operation: It's just a matter of borrowing during the time of the year.

Q. What would the money cost, what would the money cost as of the date of this appraisal, to finance this bridge?

A. At the rate of 6 per cent, for financing?

Q. Yes, to provide this money?

A. We are talking about interest during construction.

Q. The bridge company must pay interest on the money at what the money costs them, regardless of the local rate. If they can't get the money for less than 6, 8 or 10 per cent, that's what it costs them, that's what the interest during construction must be, must it not?

A. No.

Q. Then do I understand you to say that if, at the time of your valuation, money for the construction of this bridge would cost the bridge company 8 or 10 per cent, that, notwithstanding that, you would compute your interest during construction at 6 per cent?

A. No.

Q. What do you mean then?

A. The last few questions you have confused me in connection with the cost of financing, and that's another item entirely. You changed the subject from interest during construction to cost of financing.

Q. Is there anything you want to say to make yourself more clear?

A. No.

Q. It is your opinion that notwithstanding what

rate of interest may be necessary in order to obtain money for matters of this kind, nevertheless you compute interest during construction at the rate of 6 per cent?

A. Not because of the reason you mention, but because it's the legal rate and the proper rate.

(Question repeated.)

(Question and answer repeated.)

(Question repeated.)

A. No.

Q. How do you compute it?

A. At the proper rate of interest.

Q. What is the proper rate?

A. 6 per cent.

(Question repeated.)

A. No.

MR. HULL:

I don't know what is in the witness' mind.

THE COMMISSIONER:

Let him explain, if he can.

Q. Without any reference to any reasons whatever, I have no reasons in mind, let me ask you this question. Notwithstanding the fact that this company would have to pay 8 or 10 per cent for money to construct this bridge, would you compute interest during construction at the rate of 6 per cent?

A. I can't answer that question on the basis of an assumption that it cost 8 per cent for the Clark's Ferry Bridge Company to get the money.

Q. You can't answer that question on that assumption, can't you? Assume it is a fact that it would cost the Clark's Ferry Bridge Company 8 per cent for the money to construct this bridge, would you nevertheless compute interest during construc-

tion period at the rate of 6 per cent?

A. I would want to know exactly what and why it cost them 8 per cent to get the money.

Q. Answer the question?

A. If it was proper. I would want to know that 8 per cent was proper first. I am ready to allow a proper amount.

Q. Assuming you had made your investigation, and found that was proper, and they had done the very best they could in the market, and the very best they could do was 8 per cent for the money, would you, notwithstanding that fact compute your interest during construction at 6 per cent?

A. If they are doing just as well as anybody else at the time under consideration, not now, not the time they did it, if you are referring to 1924, but the time we are considering now, then I would conclude that it were a proper rate, and I would include a proper rate.

Q. What proper rate?

A. In that case, under those findings, it would be 8 per cent.

Q. Then you figured interest at the rate of 6 per cent in your valuation on the theory that the Clark's Ferry Bridge Company could obtain money at that rate, did you not?

A. Yes, I did.

Q. What knowledge have you of the ability of a toll bridge company to get money at 6 per cent as of the date of your valuation?

A. I can recall the money obtained on the refinancing of the Clark's Ferry Bridge.

Q. But in refinancing of the Clark's Ferry Bridge you didn't have reproduction—new conditions, did

you? Just answer that yes, or no. You know very well you didn't have?

A. There's no relationship between the two.

Q. You know, Mr. Curry, just as well as you sit there, that the Clark's Ferry Bridge Company was a successful industrial enterprise at the time of its refinancing, and for that reason, and for that reason alone, it was able to get money at 6 per cent, don't you know that?

A. No, I don't agree.

Q. You know that the bridge company had a successful financial history up to the time of the refinancing, do you not?

A. Yes.

Q. You know that in the refinancing and selling of their new bonds, the bankers that did the refinancing had knowledge of that favorable financial history?

A. Yes.

Q. Can you tell me any other toll bridge in the United States that in the year 1930 obtained money at the rate of 6 per cent?

A. No.

Q. Do you know any that obtained money for as low or as little as 8 per cent?

A. I have no knowledge of that.

Q. And in computing the item of cost of financing in another part of your appraisal, you have allowed for more than 6 per cent, haven't you?

A. Will you repeat that question?

(Question repeated.)

A. I don't understand the question.

MR. HULL:

Strike the question and answer out.

Q. When you assumed an interest rate of 6 per cent for obtaining money for this enterprise, for its reproduction new in 1930, as of the date of your valuation, you assumed the existence of a going concern, with a successful financial history at the time of the reproduction, don't you?

A. Yes, may I make a further statement?

Q. Yes?

A. There was a background of the same successful financial history in 1924, when you are contending they did pay more.

Q. I don't care about 1924, or 1930, or any other time. Do you not know as a valuation engineer that when you are asked to produce a reproduction cost new valuation you assume reproduction conditions without the existence at the time of a successful going concern?

A. I—

MR. MATHER:

I object. We haven't proven those facts exist in this case, and I am assuming that they don't. It's in this record there has been a bridge at this site for over a hundred years before the present ownership.

(Question repeated.)

THE COMMISSIONER:

He may answer that.

A. Not in every case.

Q. And you didn't in this case?

A. No, because I consider the facts to be different.

Q. In addition to this item of the rate of interest during construction, what other items in your valuation are influenced by the fact that there was

a bridge in existence and successful operation at the time of your assumed reproduction?

A. The cost of financing.

Q. You have allowed $43,000 for engineering and supervision. What part of that, if any, would have to be paid prior to the beginning of construction?

A. There would be a small part of perhaps $3,000 or $4,000 on preliminary engineering. That may be paid as early as the starting of the work. It somewhat depends, however, on the manner of agreement that there be between the engineer and the owner.

Q. What about the engineering that would have to be done during the period before it was possible even to design a bridge and let a contract?

A. I believe you refer to a portion not in this item at all, but in promotion and organization. Am I understanding you correctly?

Q. I am referring to engineering services prior to construction?

A. There's some engineering services in connection with the promotion and organization. There are some engineering studies and costs and expenses involved previous to letting a contract. As to whether that would be paid previous to the construction period, or not, or whether it would be paid at various times during the construction, would depend on the agreement with the engineer, and would be just according to how that agreement existed between the parties

Q. Suppose that in 1930 there had been no bridge at Clark's Ferry, and I had been interested in constructing a bridge somewhere along the river to connect two highways on either side, one of the first things I would have to do would be to get an en-

gineering report on it, isn't that true?

A. Yes, sir.

Q. Not much use of my doing anything else until I found out what the engineering report would show me, what a survey would show me, that would be the first thing that I would have to do?

A. In that survey an engineer would have a part, but not a large part.

Q. That engineer would have to make a survey of the river, studies of the flow of water, studies of the depths, soil conditions, and many other things, would he not, before he would be able to give me a report?

A. That study, however, the study would consist of a review of information that's probably largely known. It would be just a matter of putting together, properly correlated, the data that's available with this specific thing in mind, and perhaps picking up a little data that would be lacking for the specific purpose.

Q. Again you are assuming the existence of a structure there at the time of reproduction, aren't you?

A. And I am assuming use of the data that our State governing and the nation has available, and which is constantly used by men to make just such studies as you are speaking of.

Q. If I had employed you as an engineer to make a preliminary survey for me on a job like this, would you have gone to the site and made your survey, or would you have gone up here to the Capitol and made your survey from some information they gave you?

A. Not solely from either one, but the major

part of any preliminary work in connection with a study to see whether a project is feasible at all, would be the study of records, and most of it would not be at the site.

Q. Whatever that was, you say you included that in promotion and organization?

A. Yes, sir.

Q. At what stage of the progress of the development of this enterprise would the owners have to pay the cost of financing, the $37,500 that you have allowed?

A. At or near the end of the construction period, having first made the arrangements for the financing program in advance, and the arrangement would terminate, and come into existence to produce the money at that time.

Q. Let's be practical. Do you mean to say that people developing an enterprise of this kind could have gone to bankers in 1929, and gotten an undertaking from them to purchase an issue of bonds a year later, in 1930, and supply them with the money at that time?

A. There's usually some program of how you will take up the money. It may not be all at one time.

Q. Have you any knowledge of any bankers at all who would underwrite an issue of this kind twelve months in advance in the bond market that prevailed in 1929 and 1930?

A. I can't say I have any personal knowledge of anyone who would do that.

Q. Isn't it a fact that if these owners were going to reproduce this property in 1929, they would not be justified in expending any money at all, or even

writing a contract, unless they had a bond issue underwritten, before the contract for construction was written. Isn't that a fact?

A. It would be underwritten.

Q. It would have to be underwritten, and the agreement with the bankers would have to be such that they could immediately go out and sell those bonds for delivery within 30, 60 or 90 days, at the price prevailing at the time the underwriting was done?

A. I don't know that's true.

Q. Haven't you had any experience in financing enterprises of this kind?

A. Some.

Q. Has your experience in these matters led you to believe that bankers would tell you today that if you went ahead and let a contract for a structure worth $750,000, you could come back and see them a year from now, and they would take your bonds?

A. You go ahead and use the time, go ahead with the project, and by the time the financiers have got this underwriting done, you have reached a point along the road all within the approximation that I have mentioned.

Q. Would you, as an engineer, if you had the responsibility for the Clark's Ferry Bridge Company, or any other bridge company, would you, as an engineer, permit your principals to go ahead and enter into a contract for the construction of a bridge, costing $750,000, upon the word of some bankers that when the job was done they would take your bonds? You can answer that yes, or no?

A. No, I would not.

Q. Why not?

A. Because I would want the arrangements more nearly correlated than that.

Q. What you would want, and what you would insist on as a sensible engineer, a business adviser for your principals, would be a binding engagement on the part of the bankers to take your bonds before ever you entered into a contract for construction?

A. Yes, but that doesn't mean that the delivery and cost comes due at that time.

Q. But you would insist on the underwriting contract being completed and binding on both parties first?

A. Yes.

Q. Bankers, in the year 1929 and 1930, having in mind the bond market, as it existed during those two years, when bankers had entered into an engagement to take an issue of bonds of $750,000, how soon would they insist upon delivery?

A. 30 to 60 days.

Q. Don't you know this further, don't you know that during the time before brokers or bankers would underwrite any bonds at all, they would tie the owners up with an agreement giving them an option to take or leave the issue, and they would go out and actually endeavor to sell them during a period of 30 or 60 days to determine whether they should take up their option?

A. Yes.

Q. And when they came back, and took up their option, they would take it up on terms which would impose interest upon the owners from the time the underwriting agreement was entered into?

A. Yes.

Q. So that the result of that situation is that the owners would have to pay interest on this entire $37,500 during the whole period of operation?

A. No.

Q. Why not?

A. Those arrangements that you are speaking of, going out to see if they could sell under an underwriting agreement, and in 30 or 60 days taking it up, during that time you have gotten under way with your construction.

Q. No?

A. Then we don't understand each other.

Q. Let's try to. You have told me the owners could not safely go ahead and let the construction contract until there was a binding contract with the bankers to provide the money?

A. A binding contract, but still it is not underwritten in the form of delivery of securities.

Q. What do you understand the word "underwriting" to mean?

A. Well, I may be in error in my use of words.

Q. Maybe I am mistaken. All I am trying to do is have an understanding?

A. It's guarantee, use that instead of underwritten, the term that the bank uses. All the financiers do on a security issue is, they underwrite it.

Q. When an owner goes to the banker, and the banker enters into a contract with the owner to buy his bonds, he is said to underwrite that issue, is he not?

A. Meaning guarantee.

Q. He agrees to do that?

A. Yes.

Q. And no matter whether anybody in the world

ever buys one from him after that, or not, he must pay the owners the money?

A. Yes.

Q. It's probable thereafter he may go to others, and they may enter into underwriting agreements with him, but what the owner is concerned about in the development of this project is the contract with some one banker, or group of bankers, at the end binding all to take the owner's bonds?

A. I think that makes it clear.

Q. That contract must in all good business be entered into and be binding on a banker before a construction contract is let, must it not?

A. Yes, it's good practice it should be.

Q. And in the contract with the banker that underwrites the issue, the owner must engage to pay interest from the time when the bonds are underwritten, must he not?

A. Yes, that's usual, even though the delivery time is altered.

Q. Therefore, this $37,500, cost of the financing, is money that all must be expended by the owners before the contract is let?

A. Yes, yes, in fact, that's what it means, although money may be paid later, it dates to a certain date.

Q. The owners must pay interest on it all of the time?

A. Yes.

Q. You haven't allowed any interest for that, have you?

A. Not as interest during construction.

Q. You haven't allowed it anywhere, have you?

A. Yes.

Q. Where?

A. Right in the item itself.

Q. What item?

A. The item of cost of financing.

Q. Just explain how you have allowed it in that item?

A. 5 per cent is about the magnitude.

Q. What?

A. 5 per cent, cost of financing. I am talking about the item of cost of financing. That is given here as $37,500. That is equivalent to about 5 per cent of all of the other items in this valuation. That will include not only the cost of financing, but all incidental charges going with it.

Q. How did you compute that $37,500?

A. That is the amount, cost of financing, that was allowed in the past case, the old case, by the Commission.

Q. So you didn't make any independent attempt to ascertain what the cost of financing would be as of the date of your appraisal?

A. Nothing more than to give it consideration, and it was my opinion that it's the proper amount. I judged my figure.

Q. We will return to that a little later. You know, I believe, that Mr. White, of the American Appraisal Company, estimated 16 months as the period for the construction of this job, did you not?

A. I think so.

Q. You know the contract for actual construction in 1924 was for 15 and two-thirds months?

A. I remember that you said that this morning, and I think it's as much as I do remember of the contract. I also remember the job was completed

147 days ahead of the contract requirements.

Q. Do you know why they were enabled to complete it 147 days ahead?

A. What?

Q. Do you know why they were able to complete it 147 days ahead?

A. It's what I would expect them to do. I don't—

Q. Don't you know as a matter of fact that the Vang Construction Company took the contract at that time, because they had a lot of equipment and a large organization idle, and they threw it all on to that job, and employed on that job two or three times the amount of equipment and organization, which they would have used ordinarily, or which any other contractor would have used on such a contract. Don't you know that fact in the history of this construction?

A. I don't agree. I think he made good use of his equipment.

Q. Were you up there on this job during its construction?

A. A frequent visitor.

Q. Do you not recall the unusual amount of equipment, and the unusual number of men he had employed?

A. It's not unusual to me. Working with my firm that's my recollection of what they used to do. In fact, my immediate superior for just approximately two years before I left Gannett, Seelye and Fleming, was former superintendent of construction with the Vang Construction Company. It looked to me just like their usual manner of doing work. It is also the manner I found my superior was using

when I went out to the work, and one that he instilled into me to use.

Q. In estimating this period of twelve months, which you allow for the construction, have you considered what time in the year construction should be begun?

A. As definitely as the conditions, river conditions recur in the periods of the year. It might be May, or late May that they could actually begin to do work in the river. There is preparatory work that could be done ahead of that time, and certainly the construction period, as you would consider it from the first day of the opening work, should be well ahead of that.

Q. I did not understand you. You say you would begin late in May, and then you say the beginning of construction would be way in advance of that?

A. The beginning of the construction period preparatory to actually getting into the river to work.

Q. Let us assume that we are to start the actual construction work in the river late in May. How much of the construction period will precede that?

A. In my opinion, if I were to do it, I would want probably three or four weeks.

Q. So you would want to begin late in April?

A. Yes.

Q. You would want the construction period to begin late in April?

A. Yes.

Q. How many months would you continue actual construction after starting late in May?

A. I would want by the last of August, or not later than September 15th, to be well out of the way with the foundations, and lower parts of the struc-

ture, and continue in the heavy construction work above the water and expect that to be well towards completed by the end of November, about Thanksgiving time, the remainder.

Q. What part is that?

A. What part of the structure, the arch rings, and every bit of the concrete work, that would be outside work, except some concrete work that might be incidental to toll houses, and some things of that kind.

Q. Why waste all this time, you could do it in six months, could you not?

A. Not economically.

Q. What?

A. I probably could, but not economically. It's a possibility. I think you could do it in less than a year, but I don't think it would be economical.

Q. So that the period within which you do it has something to do with that, hasn't it?

A. Yes.

Q. And would it not be more economical to figure a period of 16 months than a period of 12 months?

A. I think not.

Q. What study, if any, did you make of the flood conditions, water conditions in the Susquehanna River, preliminary to this appraisal, I mean the conditions prevailing at Clark's Ferry?

A. No particular study for this purpose. I have been in Harrisburg since 1920.

Q. Do I understand you estimated your period of construction here without any special examination of the records of the stream flow of the river?

A. Yes.

Q. In the light of what you say, Mr. Curry, it

was an improvident thing for Mr. Masters to estimate a period of 15 and two-thirds months for this construction work, and allow his company to agree to pay a bonus for earlier completion, wasn't it?

A. I am unable to say whether it was, or not, because I do not know, I assume I do not know, some of the circumstances in connection with the corporation, and its business that was being carried on in the old bridge that influenced him in that. I don't know what influenced him. He may have had some good reasons in connection with something else other than the structure I have under consideration for reproduction.

Q. Can you imagine any other such reasons. You know this, do you not, that the old bridge there was rapidly becoming obsolete, that it was a menace to the owners and the public at the time they started construction on this new bridge in 1924, and that the uppermost thing in their minds was to get it completed and open to the public as early as possible. You know that history, don't you?

A. Yes, that's what I am thinking about when I hesitate in the answer.

Q. In view of that, in view of your testimony that 12 months is ample time to build this structure, it was very improvident on the part of Mr. Masters, to bind his company to a construction period of 15 and two-thirds months, and provide for a penalty of $150 a day for every day that it was completed inside of that long construction period, wasn't it?

A. I don't think so, because every bidder knew that fact and took it into consideration, and each bidder had in mind he wanted, he must have had some figure in mind he wanted to get for that job,

and he would not care, in making his bid, from what source he got it, and having full knowledge of those conditions, and estimating his time for completion, it would be reflected in all of the bidders' bids.

Q. Then you think he would cut off from what would be his normal bid the amount of bonus he thought he could make?

A. Insofar as the contractor would do such a thing, and in the matter they do them.

Q. What do you mean?

A. I mean they might not cut that off in his bid in any particular manner, but it would be reflected in the total.

Q. Coming back to the item of cost of financing, will you give me the exact amount of money which you contemplate in your estimate would have to be raised by the owners to build this bridge?

A. I don't know whether I am expected to answer it, property and organization, and all, or just the structure?

Q. No, I want to know how much money the bridge company would have to raise to complete this job, land, engineering, everything, how much money they have got to raise?

A. $783,274.

Q. $783,274?

A. Which is the amount of the reproduction cost new.

Q. Is that the amount on which you computed your cost of financing?

A. I didn't compute the amount. I said that it was from the Commission's decision in the previous case. I don't know how closely that coincides with the amount of financing that figure was allowed

for. I made no independent determination. It's not far different.

Q. Didn't you consider the conditions under which the company would have to obtain this money, as they prevailed at the time you made your appraisal?

A. Yes, necessarily so.

Q. What did you consider those conditions for?

A. They are basic in a determination of that kind.

Q. And after considering the conditions that existed in 1930 at the time of your appraisal, you went and took the cost of financing as determined by the Commission in 1925 or 1926 as to cost of financing, without making any computation of the amount of money, what amount of brokerage would would be required to reproduce the bridge in 1930?

A. That's true. I did not recompute because I was of the opinion, after considering, that the conditions were as favorable, or more favorable than the time of the Commission's determination.

Q. Do you think that the bond market was as favorable in 1930, at the time of your appraisal, as it was in 1925 and 1926?

A. Not at the exact time I was making the appraisal.

Q. At any time between September, 1929, and January 1st, 1931, was there a bond market that, in your opinion, was equivalent to, or as good as the bond market in 1924 or 1925?

A. No.

Q. And the bond market, from June, 1929, throughout the remainder of that year, and 1930, the bond market had almost hit bottom, hadn't it?

A. My opinion disagrees a little as to the time, because your refinancing period was not in an unfavorable time, of the Clark's Ferry bridge.

Q. It was not unfavorable?

A. The refinancing?

Q. Yes?

A. I think not. I didn't look at the dates.

Q. I was familiar with it, and I was familiar with financing some other things at that time. You mean to tell me that at that time, the time of the refinancing of those bonds, we had a favorable bond market?

A. I can either look up, or be told of the time of that financing. I have read it, but I have forgotten it.

Q. I think it was in the latter part of 1929, that's my recollection?

A. It was not as early as May or June?

Q. It may have been during the summer?

A. I think that was an unusually favorable time.

Q. Don't you know that the refinancing of the Clark's Ferry bridge was a financial transaction all of its own, different from any other transaction of its kind, that could not have been put over here in Harrisburg, or anywhere else, at that time?

A. No, I don't. I don't assume you are wrong, but I don't know it.

Q. If it cost the Clark's Ferry Bridge Company in 1929 or 1930 five per cent to raise their money this $783,274, their cost of financing at that rate would have been $39,162. That's right, isn't it?

A. I expect it's right.

Q. What would it have been at 8 per cent?

A. $62,660 approximately.

Q. Where did you get the idea that the Commission only allowed $37,500 in the former case?

A. The Commission's report on the matter.

Q. Says what?

A. As yet I haven't it before me.

Q. Isn't this the fact, Mr. Curry, that the Commission drew a distinction between brokerage and bond discount. They allowed $31,500, brokerage, to be included, and in addition thereto they allowed $27,000, bond discount, to be amortized out of earnings?

A. I haven't any manner of following you, but I assume it's correct. It sounds all right.

Q. Would you like to check it up with the report of the Commission? I have it here. So that the Commission allowed $37,522, which was the brokerage involved, and in addition to that allowed the company to amortize $27,000, which was the amount of bond discount, out of earnings, over the life of the bonds. That's a fact, isn't it?

A. The only exception I take to that statement is that they allowed $1,331 per year for the rates at the time they made the rates on the basis you just mentioned.

Q. Is there any difference?

A. I don't know whether that program will be completed, or not.

Q. What program?

A. The amortization for a period of 15 years.

Q. That has not anything to do with it. It is the fact that the Commission allowed $37,582 to be included in the rate basis as the cost of financing, and in addition to that recognized the fact that it cost these people $27,000 more to get their money,

and allowed them to amortize that out of earnings over a period of 15 years, isn't that a fact?

MR. MATHER:

The order speaks for itself. It is already offered in the record.

MR. HULL:

This witness has been spoken to a number of times. He has said that he has adopted the Commission's estimate of the cost of financing in the previous case; and I think that in the light of the facts, the witness ought to frankly say he was mistaken, and that the Commission recognized that it cost these people $58,000 instead of $37,000.

THE COMMISSIONER:

You may proceed.

MR. MATHER:

Mr. Curry said the cost of financing was $37,000, not cost of financing plus the bond discount, which are two separate and distinct things.

THE COMMISSIONER:

The record will speak for itself.

MR. HULL:

Q. I direct your attention to the item of promotion and organization. How did you compute that?

A. That consists of the following items in the following amounts.

Q. I am not asking you now to give me the items. I am asking you how you compute it. Did you compute a percentage basis, or individual items and evaluate them, and add them up?

A. By evaluating each item and adding them.

Q. Let's take the items?

A. Preliminary study covering traffic, and matters with reference to probable cost of project.

Q. How much did you allow for that?

A. $1,000 the corporate organization.

Q. Did that include preliminary estimates of cost?

A. No, not to any extent, just the bare details of what might be expected, just for a very preliminary study of possibilities, and cost of structure, and other costs also.

Q. What's next?

A. Corporate organization, $2,000.

Q. That's a pretty broad item. Is that just the legal expense?

A. That covers legal expense, the cost in connection with any proceedings, necessary legal proceedings, fees and the securities expense.

Q. Legal expense, fees and expense of issuing securities, and the preparation of all other necessary legal documents?

A. Yes.

Q. These items you allowed how much?

A. $2,000.

Q. What else?

A. The permits, early taxes.

Q. Permit for what?

A. Any permits necessary.

Q. Did you say taxes?

A. Early taxes.

Q. What do you mean by early taxes?

A. As soon as your corporation is formed, you have certain taxes that begin to ensue.

Q. You mean taxes during construction?

A. No, taxes from the time of the organization of the corporation down through to the time when the construction is beginning.

Q. During the period preceding construction?

A. Pre construction period.

Q. Your franchises, franchises and permits?

A. Franchises are also included in this item?

Q. And early taxes?

A. Yes.

Q. And those items are?

A. $2,000.

Q. What else?

A. The salaries and expense of promoters and clerical force $1,000.

Q. What else?

A. Preliminary consideration of finance matters with financiers, looking into the feasibility of ways and means, $1,000.

Q. What else?

A. Interest charges, pre construction period, on these matters $500.

Q. On what matters?

A. Matters of expense then listed.

Q. All the things we are now itemizing?

A. Yes.

Q. You would allow that interest for what period?

A. I didn't consider it for a period. It's an item where there's very much chance for considerable variance of this program, and I could not tie it down for this period. It's an allowance. I know there will be such a thing happen to a greater or less degree, it must happen, and no one of these items will recur just in the same amount each time, and therefore I was not able to do so, to make a proper allowance, but it's a small item, and I did take recognition of it.

Q. I am just wondering why you allowed $500 interest, instead of $50 or $1,500. You must have used some basis of estimate?

A. I expect it would be less than $500, and I didn't pursue it any further than to make it that small.

Q. What else?

A. Miscellaneous expenses of any kind that I might have overlooked in any way, $500.

Q. In conjunction with those items, will you give me the items that go to make up your administration, legal and general expenses, and amounts? Have you made that up the same way?

A. Compensation of the executives during pre construction?

Q. Pre construction?

A. No, I didn't mean that. This is all during construction, administration, executive and legal expenses during construction.

Q. Yes?

A. These other items, promotion and organization, though, are prior to construction.

Q. Pre construction, the compensation of executives, how much?

A. $2,000. Clerical and office expense $1,000. Incidental corporate expenses $1,000. Taxes during construction $1,000. Fire insurance during construction $500. Legal fees

Q. Fire insurance was how much?

A. $500.

Q. Legal fees how much?

A. Legal fees applicable and incidental to construction work $2,000. Miscellaneous item of $500, itemized just miscellaneous.

Q. Don't you think you have been a little over generous with the lawyer?

A. I think the engineers did pretty well also.

Q. As I see it you have allowed only $1,000 for the engineers?

A. That's pre construction. This is during construction, where they have got $13,000.

Q. It is your opinion that all of the engineering study that would be necessary previous to actually embarking on the development of a project of this kind, could be obtained for $1,000?

A. I believe so. I say that having in mind that no two individuals would carry this matter on in the same manner exactly. Some individuals might want more expensive preliminary investigation, but if that be so, then there is that much more accomplished in an engineering way towards the engineering which is to follow, and as to whether engineering through the pre construction period and the construction period would necessarily be divided as I have divided it, that's not a fixed matter. It's the way I think in my opinion I would do it.

Q. But the owner doesn't get the benefit of any additional work done preliminary to construction by a reduction in the fee of the engineer for the work during construction, does he?

A. I believe he would.

Q. Doesn't he employ an engineer to make a preliminary study and report, and pay him for that, and he may have another engineer for design and construction?

A. Yes, many times that's true, more often than not.

Q. And the engineer who designs and constructs,

doesn't do his work for anything less because somebody else made the preliminary study, does he?

A. No, because what somebody else made up is just in preparation, is a preliminary study and report, which is in the hands of the corporation, information and data that you must have to proceed with the plans, and the engineer, he would be gauged by that in his fee.

Q. If you were employed as engineer to design and construct this bridge, how would you fix your fee?

(At this point a recess of five minutes was taken.)

(Question repeated.)

A. I would probably consider that my fee would be for all engineering, beginning with the plans and ending with the end of the construction, five per cent.

Q. Figured on a percentage basis?

A. That would hold true, unless there were some outstanding facts with reference to what I had to start with by way of any preliminary study that gave me information which I otherwise would have to spend time and effort on.

Q. Mr. Curry, did you during the years you were with Gannett, Seelye and Fleming make any preliminary engineering surveys for new projects comparable to this in size and character?

A. No, most of my work with Gannett, Seelye and Fleming that brought me in touch with the subject you mention was a study of records and opinions to determine what their experience had been; that was in connection with valuation work.

Q. Do you know of any way, or any engineer, by whom you could get a preliminary engineering

study of this project made, which would be sufficient for the owners to act upon for a thousand dollars?

A. Yes, it's my opinion that you could get that much engineering done with firms I have worked for.

Q. But you, yourself, never did any job like it?

A. No, not a project for a bridge over the Susquehanna, there's very few of them.

Q. Have you knowledge of any other project that your employers, Gannett, Seelye and Fleming, engaged in comparable to this, during the period that you were employed by them?

A. No, I don't recall any job I would consider comparable to this, that they had.

Q. Then on what do you base your statement you could have this preliminary survey made for a thousand dollars?

A. I know they would have been very glad to obtain such a project.

Q. Who?

A. My employers.

Q. You think Gannett, Seelye and Fleming would have done it for a thousand dollars. If they never had a job of that kind, what makes you think they would be glad to do it for that?

A. I have seen and followed their attitude and policies in every kind of work.

Q. Then their policy would have something to do with it, would it?

A. Yes.

Q. And they would make the preliminary study for a small amount in anticipation of becoming the construction engineers?

A. Certainly that fact would be in their mind.

Q. Did you consider that factor in determining that you could get this done for a thousand dollars?

A. I believe I overlooked part of your question. Did you say constructors or engineers. Read the question again.

(Question repeated.)

A. I understood it correctly, yes.

Q. You considered that a factor in reaching the conclusion that the preliminary study could be made for a thousand dollars?

A. I did. I think most engineers would give that consideration.

Q. A thousand dollars is less than the survey is actually worth, isn't it?

A. Yes, but not less than what it could be obtained for.

Q. With respect to those items of legal expenses for organization, fees and expenses of issuing securities and other necessary legal documents, which you have lumped at $2,000, will you tell us what is your estimate of the cost of printing the bonds that would be necessary in this case?

A. It could vary considerably, but I should think a reasonable amount would be somewhere around $500. I really don't quite know just what form of securities they might develop. That would have an effect on the printing, too. I know there would be an expense. As to what it would actually amount to, I don't know, but I thought that would be reasonable.

Q. What would be the cost of printing the necessary stock certificates, and the printing of the mortgage?

A. I didn't consider that that would be very

much. It's according to how the stock was distributed. I understand your previous question covered the certificates.

Q. My previous question was directed to bonds only?

A. Bonds only, I think $500 would cover the printing of all of the bonds, stocks and mortgage.

Q. Including the printing of the mortgage?

A. Yes, I think so.

Q. Did you ever see the mortgage in this case?

A. No. Of course, I saw some excerpts, but I never saw the mortgage.

Q. Would it not cost approximately $250 to $300 to print the mortgage alone?

A. I would not expect so. I don't know about this mortgage.

Q. Would not the stock certificates cost about $50, and the bonds cost about $500?

A. I think not. My opinion is it would be about $500 worth of printing.

Q. Have you any experience on which to base that opinion?

A. Some, but I don't know that I ever had anything to do with the printing of a mortgage.

Q. Do you know what it costs per page to print?

A. No, my opinion is not based on my memory of cost to print a page, as it is in the costs I have seen itemized for companies. I don't know what the number of pages represented were, and I don't know that I have met those costs. Certainly these things vary, and I don't know what they would be in connection with the Clark's Ferry bridge, as they put out their securities.

Q. Do you know that a hundred pages is not an

unusual length for a corporate mortgage securing a bond issue?

A. Yes, I think that's true.

Q. You know that printing runs to $2, to $2.50 a page?

A. No, I don't know that.

Q. Do you know anything to the contrary?

A. No, I don't have knowledge of what the printing of the mortgage per page would be.

Q. Then you are not prepared to say you would get it done for any less than that?

A. No.

Q. Do you know what fees would have to be paid to qualify the issue of stocks and bonds for sale, at the Securities Commission of Pennsylvania?

A. I can't give that.

Q. $50 for bonds, and $50 for stock, isn't it?

A. I don't know.

Q. You know nothing to the contrary?

A. No, I don't know anything to the contrary.

Q. Did you estimate what the bonus due to the State would be upon the issuance of the stock of this company?

A. I can't recall that as a separate item.

Q. They have capital stock amounting to $425,000. Do you know what the rate of bonus is they must pay the State?

A. I have known, but I can't recall now.

Q. One-fifth of one per cent. That would amount to how much?

THE COMMISSIONER:

Have you it, Mr. Hull?

MR. HULL:

I think $850.

THE COMMISSIONER:

It's a matter of calculation.

Q. $850, is it, Mr. Curry?

A. What did you base that on?

Q. Stock of the par value of $425,000.

A. That's right, $850.

Q. Have you allowed anything in those items for search of title to the lands?

A. Are you talking about the corporate organization. What do you mean by those items?

Q. The three items we are dealing with are legal expenses for organization, fees and expenses for issuing securities, and other expenses of the issuance. I want to know whether you allowed in that anything for the cost of searching title?

A. No.

Q. Whereabouts did you allow for the cost of searching title?

A. Under administrative legal and general expenses during construction, legal fees.

Q. You don't think that they would search the title during the period of construction, do you?

A. Right at the start.

Q. What?

A. Right at the beginning. The land is the first item usually that has to be secured.

Q. You mean to say they would let the contract for construction before they knew they had a good title to the property, or not?

A. No.

Q. Then that is not an item incurred during construction. That is one of the very first items of work

that must be done and paid for?

A. In under promotion and organization.

Q. You mean to say they would go ahead and promote and organize and promote a company to build a bridge up there before they knew they had a good title, or could get a good title to the land?

A. Yes.

Q. They would?

A. Yes, sir.

Q. Whereabouts have you any allowance for title insurance to the trustee under the mortgage?

A. Not as such an item. I will have to consider whether it's covered in any way. Cost of financing.

Q. You put title insurance into cost of financing and how much of it did you put in there?

A. I don't know how much of that is represented by that item of insurance.

Q. What would the title insurance cost on this project?

A. I have no knowledge of that.

Q. It would have to be what the bankers call mortgage insurance, I think?

A. Yes.

Q. Including guarantee of the title of the property to the owner, and good title to the mortgage, and including also another guarantee against claim of sub-contractors or material men. You say you do not know what that would cost?

A. No, I don't know.

Q. Don't you know the usual rate for that is 2 per cent of the mortgage?

A. No, I don't know that.

Q. That item alone of 2 per cent of the mort-

gage bond issue $450,000, would amount to $9,000, wouldn't it?

A. Yes.

Q. If we allow a bonus to the State on capital stock, amounting to $850, $500 for printing bonds, $50 for printing stock, $250 for printing mortgage, $100 for fees to the Securities Commission, we have a total of $1,750. That allows out of your $2,000, $250 for attorney's fees for promotion and organization?

A. That's almost impossible for me to follow the specific items you have there. I am under the impression you have mentioned items that are cost of financing, and items that are promotion and organization to a point where I can't—I will have to write them down and consider them.

Q. The bonus on capital stock you included, did you not, in the fees and expense of issuing securities?

A. Only the preliminary organization.

Q. Do you know what a bonus on capital stock is?

A. Paid to the State, yes.

Q. For what?

A. I know it's a requirement, that's all I know.

Q. Do you know when it's paid, and for what it's paid?

A. It's paid at the time of the issue.

Q. Paid at the time of the incorporation of the company. You file your application with the Secretary of the Commonwealth, and lay down a certified check for the bonus drawn to the order of the Secretary of Revenue.

A. For how much—I should not ask you questions—are you assuming that in the preliminary

organization will be capitalized, $783,000?

Q. No, we figure our bonus on $425,000, which was the amount of capital stock issued.

A. You suggested that figure. I answered your question.

Q. It's the amount shown by Complainant's Exhibit No. 1 to be the capital stock of this company?

A. It has not always been, and would not be at the time of the preliminary organization, in accordance with my opinion of good practice.

Q. How much capital stock did you figure that this corporation ought to have at the time of its incorporation and organization?

A. It probably would be a nominal security issue.

Q. What is nominal?

A. $5,000.

Q. All right, when did you increase it?

A. Of necessity the increase in securities in some form would have to follow as the capital was needed, and after promotion and organization, you enter upon the activities of the company with regard to construction, and at that period, and at that period, financing would be taken up, the large part of the financing program, that would then be enlarged to follow the requirements, all through to the wind up at the end of the construction period, and when the business started in operation.

Q. You think it would be good practice in the reproduction of this enterprise, incorporated for $5,000, and not increase your capital stock until you were nearly through with your construction program?

A. It would have to be arranged for right early

in the construction, not the end.

Q. And isn't it a fact—

A. Promotion periods sometimes extend for several years.

Q. But, sometimes in advance of letting of the contract, you would know, approximately, what the total cost of your enterprise was going to be, you would know how much you were going to be able to raise on your bond issue, and you would know that you would need for the complete development of this enterprise approximately $400,000 to $500,000 worth of stock, wouldn't you?

A. Yes, I think that would be reasonable.

Q. Don't you know that it would be good practice to increase your capital stock to that amount when it became evident that that amount would be required, and that it would have no advantage to the corporation in delaying it any longer than that?

A. Yes, and there would be a further step, an adjustment, if necessary, at the close, or at the end of the construction period should there be any variation from your anticipations. It would be completed then.

Q. And this bonus of $850, then, has got to be paid to the Commonwealth at or before the time when you start your construction?

A. Yes.

Q. Where have you allowed for it?

A. It's in the cost of financing.

Q. Why would you put it in there?

A. It's means by which you obtain money, one of the means.

Q. It's an organization expense, isn't it, and was it not so treated by the Commission in its report in

the previous case, which I understand you yourself examined on behalf of the Commission?

A. I don't know; but I do know it's under cost of financing on the records of the company, re legal services, in re stock and bond issue, accounting services, stock certificates, commission and expense on preferred stock, recording deed, printing mortgage, printing bonds, and so forth, services in re payment of coupons, expenses in re signing of bonds, services certifying bonds, etc., legal services for trustees, stamps, advertising, traveling expenses, miscellaneous.

Q. You say that's all in the cost of financing?

A. On the books of the company now that's where they are classified.

Q. Where are you reading from?

A. Mr. Keen's exhibit on the study of the company books.

Q. Page what?

A. Exhibit 3, items 14 to 29 inclusive under the general heading "Cost of Financing".

Q. You didn't make in your valuation any such allowance as is included here, did you?

A. But the Commission has a classification of accounts, and I can only assume when the Commission said they allowed $37,500 for cost of financing that they were using the term according to their classification of accounts.

Q. There's no classification of accounts for toll bridges?

A. No, but that item is a general one.

Q. There is no classification of accounts—I may be wrong—is there any classification of accounts, which the Clark's Ferry Bridge Company is requir-

ed by regulation of the Commission to follow in setting up its accounts?

A. I rather believe not, specifically, as a classification of accounts that the Commission has required for bridge companies, but the item of cost of financing is the same for all these utilities as far as I know, and Mr. Keen, who made this study, I would assume would follow the practices and definitions as used everywhere else, wherever they have, up to this time, passed upon a uniform classification of accounts.

Q. Is that your only basis for saying that your estimate of $37,500 for cost of financing included those items?

A. No more than that's where I believe they belong.

Q. If I understand you, you adopted the figure of $37,500 as the cost of financing, because you thought that was the amount that the Commission had previously allowed, and now you say that in your opinion, that covered these various items that you have enumerated, because you think they ought to be in there?

A. By definition.

Q. Without taking the time for you to do it now, will you prepare a statement showing what you believe the cost of financing should be for the reproduction of this property, without any regard to the previous finding of the Commission, and show the items that you included in it, and show how you arrive at those items?

A. Will I prepare an independent estimate? I have no knowledge what the answer is. I told you what the base of these figures is. I was satisfied in

making up the estimate that it was in accordance with my opinion, and put it in at that amount. I have no knowledge of what an itemized study by myself will reveal, to be my opinion thereafter.

Q. Referring to the legal services during the period of promotion and organization, how much did you allow for that?

A. That was covered by the item of $2,000 in corporate organization. It's one of the four items, and while I haven't any details prepared at this time, I would expect that it should be $200, for just the preliminary corporate organization.

Q. Do you think that you could get responsible counsel to do the legal work in connection with the promotion and organization of an enterprise of this kind for $200?

A. I believe so. I admit it's not a large fee, but in representing the proprietor of a business, it is begun, it is usually begun small, and then an idea occurs to somebody, and it would not be anything like the organization of the Clark's Ferry Bridge Company in this business at this time, or at the time of the construction I think those things start small. They are usually organized as a small unit.

Q. Have you ever employed attorneys to do a job of this kind?

A. Yes.

Q. Responsible attorneys in this vicinity?

A. This one I am thinking of at the present time is at Bellefonte. My answer is not literally correct, either. I don't want to be misunderstood. In the organization of companies, subsidiary companies I have spoken of previously today, the attorneys

were not procured by me in the sense that my superiors directed me to see a certain man and make some certain arrangements, but I have knowledge of the fact as to what the fees were, and I had a part in the obtaining of the service and working with them. I did not actually secure the services.

Q. Do you know what they were paid?

A. Yes.

Q. You still think you could get attorneys to do all of the legal work prior to the beginning of construction, in connection with the promotion and organization of this company, for $200?

A. I do. I call attention to the fact that I have a miscellaneous item in here to absorb something.

Q. Your miscellaneous item is only $500?

A. I know it is. I just called attention to the fact that it is there. I don't expect that to be over $200.

Q. How much did you allow for the services of the promoter?

A. As separate from the item I gave you of promoter and clerical salary?

Q. You gave me an item of clerical salary and promoter, $1,000. I wondered how much of that you allowed to the promoter?

A. The major portion of it. There would be little clerical work.

Q. $750?

A. Yes.

Q. Do you think any promoter, who conceived this enterprise, who interested people in it to the point of investing their money, and engaged in the organization of this enterprise, do you think any promoter at all would think of doing the necessary

work for $750?

A. Yes, I have known of so much promotion that is done for nothing, I think that's a reasonable allowance.

Q. Promotion done for nothing?

A. Exactly, in the sense that as full payment for services, under those circumstances, no doubt the parties expect to gain some recompense later in their connection with the company and its affairs.

Q. How?

A. As a business for them to participate in further; pursue their business characteristics.

Q. What would the promoter of this enterprise do after the bridge was opened to traffic?

A. He would probably be a stockholder.

Q. How would he get his stock?

A. He would look after that.

Q. How?

A. At the time he promoted it.

Q. How?

A. I don't see how he would. It's in his control.

Q. Would he buy his stock, and pay cash for it like any other stockholder who bought?

A. Yes.

Q. Then how would he have any advantage, or get any benefit in that way as a return for his services as promoter?

A. You mean over and above a stockholder who just came in at the beginning of the operation?

Q. Yes?

A. He would not get any advantage over and above that, but he is willing to do the promoting, in order to be one of those that do get in at that phase, or on that basis. I would assume there's sometimes

promoters, purely professional promoters, that expect to get out, and they get theirs in other ways.

Q. You know that a promoter's services in an enterprise of this kind are rendered during the period of promotion and organization, down to the time that construction work is begun. After that time, the company is organized, the issuance of securities is provided for, and the promoter's work is done. That's true, isn't it?

A. That's true.

Q. But his compensation may be possible in several ways. He may be paid in cash some, that's correct, isn't it?

A. That's right.

Q. If he is not paid in cash, he may have a contract with the company for the issuance of stock to him for his services. That's another way of paying, isn't it?

A. Yes.

Q. But he isn't paid for his services if he merely buys stock at a hundred cents on the dollar just like everybody else, is he?

A. Not by that. The mere fact that he is not paid, that doesn't rate him over and above anyone else?

Q. A promoter in developing an enterprise of this kind would have to get more than $750 out of it, wouldn't he, in one way or another?

A. Not as the promoter. You say in one way or another?

Q. Yes?

A. If he is interested in the particular kind of business he is promoting, he is glad of the opportunity to be in on the ground floor and stay as a

stockholder. He expects all his return on the money invested in stock will be a recompense to him.

Q. You tell me when he goes to buy stock he is going to pay cash for it just like anybody else; and you admit that there is not any advantage to him in doing that, and that he is not thereby receiving payment for his services as a promoter?

A. No advantage to him in money, but as to the choice of business, and knowledge of where he is investing, and his desire with reference to how he will invest his money, he would consider it as an advantage; just the same as I said an engineer would make a preliminary study as cheap as possible, a promoter will be glad to do somewhat the same thing, and I have in mind that the present Clark's Ferry Bridge Corporation was promoted and carried on by the same men or their families.

Q. And again you are not assuming reproduction cost and new conditions, are you?

A. Yes.

Q. You are assuming historical conditions, you have in mind the history of this particular bridge, and the manner in which it was organized and incorporated by the four principal stockholders, don't you?

A. Yes.

Q. And those are not theoretical reproduction conditions, are they?

A. They are. I say they are, and I say that that situation was not an unusual one, or would not be today.

Q. You say that $750 is the only amount that should be capitalized in the developement of an enterprise like this for the services of the promoter?

A. That's all I have allowed.

Q. You say that's all that would be required?

A. I believe so, that's my opinion.

Q. You have allowed $2,000 for the salaries of executives during construction. Your construction period is a year?

A. Yes, sir.

Q. What executives did you have in mind, and what were you going to pay them?

A. I have not analyzed that more than to make the $2,000 allowance. That's the furthest I have made a breakdown.

Q. Could you get any responsible business man, who would undertake to be an executive officer of this corporation for a period of a year during the construction of this property, and render that service for $2,000?

A. Yes.

Q. Where do you think you could get such an officer?

A. Right here, anywhere.

Q. How much of his time do you think he would have to devote to it?

A. Not a large part.

Q. How much?

A. Offhand I would say 20 per cent, 25 per cent, I will say 20 per cent.

Q. Do you think that it would require more or less of the services of an executive during this year of construction than it would require later on during the years of operation?

A. Oh, yes, very much.

Q. Require very much more, wouldn't it?

A. Later on require not very much more.

Q. Don't you think it would require more during operation than it would during construction?

A. A considerable amount more, anyway. Construction is in the hand of your engineers, as far as the construction itself is concerned.

Q. You may have considerably more faith in your engineers than the average owner. The average man building a half a million dollar job is on the job all the time. He is watching his engineers and his architects?

A. I expect that's true. I am one of the engineers.

Q. That's the owner's business, isn't it?

A. While it's the owner's business, it's similarly the executive's business to place the work in the hands of a man whom he expects to depend on. I assume that there should be a close contact and relationship and interest in what is going on, and that will require some time, but it should not occupy his full time, and I am assuming that this executive will be a good class man, but not full time.

Q. Would it not require more time than it would take after the bridge was in operation, and an organization set up to carry on the work?

A. I think not. It depends on the set up, but when you have placed the work in the hands of supposed experts, it has less requirement of supervision than in work where you would have a superintendent and an organization that would have much less responsibility, and be of an entirely different character. I think they would have, according to my opinion of how that would be run, according to the way it's run now, that there would be fully as much supervision as during the time of the con-

struction, when you had placed the work in the hands of experts, and I would hope that they could have full confidence in those experts.

Q. Let's consider your item of taxes during construction. Assuming a bond issue of $500,000, what would your tax on those bonds be during the year's period of construction?

MR. MATHER:

What tax do you refer to, the four mills tax?

MR. HULL:

Yes.

MR. MATHER:

Are you assuming tax free or tax refund bonds?

MR. HULL:

I am assuming that—

A. Just $2,000.

Q. You know these securities, in order to be marketable, would have to be issued with a tax free covenant, wouldn't they?

A. I don't think anything to the contrary.

Q. That's the usual?

A. I have seen that a number of times.

Q. That's almost the invariable rule, and if you wanted to have those bonds underwritten by bankers, they would insist on that provision being in?

A. This was so up to the present time. I don't know whether there will be any change, or not.

Q. Were you assuming reproduction under conditions at the time you made this appraisal?

A. Yes.

Q. There would be an item of $2,000. Will you tell us what the Capital Stock tax would be during the year's period of construction, assuming, say, $400,000 of capital stock outstanding?

A. $2,000.

Q. Do you know what the local taxes on lands owned by the Clark's Ferry Bridge Company were in 1929 or 1930 at the time of your reproduction estimate?

A. I have it in mind.

Q. I might say that the tax for 1929, as given in Mr. Keen's report, amounted to $102.18. They probably would not be less in 1930, would they?

A. I think not.

Q. Then we would have to have the bond tax, capital stock tax and local taxes for a year during the period of construction, a total of $4,102.18, would we not?

A. Yes.

Q. For which you have made an allowance of $1,000?

A. I made an allowance for $1,000.

Q. That's what you allowed for taxes during construction?

A. I made an allowance of $1,000, and—

MR. MATHER:

What was the rest of your answer?

WITNESS:

Not for just this.

Q. I didn't mean to imply you had worked it out this way and then deliberately cut it to 25 per cent of the requirements. I didn't mean to imply that. What I wanted to get at was this, your total allowance for taxes during the period of construction was $1,000?

A. Yes.

Q. And there is no part of that item in the cost of financing, or any other items in your valuation?

A. No. However, you have assumed a basis here, which results in $900,000 stock and bonds, so I am not saying just what this adjustment might be, but at least it doesn't conform to the set up necessary.

Q. What in your judgment would be the set up necessary?

A. The combination, it's hardly necessary to separate, is always stocks and bonds; the amount of money involved is $783,274, according to my valuation.

Q. You would have to allow about $800,000 as a minimum, wouldn't you. You cannot know when you start to provide for and market your stock and bonds, you cannot know the exact number of dollars and cents that an engineer later on is going to place as the value of the property, can you?

A. No, but it's just as usual that they provide, say, $750,000, or even less than that, and then go out and make short time loans to make up the remainder. That's quite common.

Q. Don't you deem it necessary, in developing this enterprise, using your own figures, would you not deem it necessary to provide for $800,000?

A. I did not suggest the figure of $800,000. I believe I would have said $780,000.

Q. $780,000, that's not far different. Your Capital Stock and Bond Tax for a year on $780,000 would be materially in excess of what you have allowed for that item, would they not, about at the rate of four and two-thirds mills instead of five mills?

A. That would be fair.

Q. $3,600 in round numbers, plus $102 tax on land?

MR. HULL:

I notice it is about a quarter of five. I want to recall Mr. Jupenlaz for a few questions. I can't finish with Mr. Curry tonight. Shall I, or may I discontinue cross examination of Mr. Curry, and call Mr. Jupenlaz, so that he can then leave town.

THE COMMISSIONER:

You may.

WILFRED JUPENLAZ, recalled.

Direct Examination

MR. HULL:

Q. Since you left the stand earlier in the day, did you make inquiry in the Highway Department, particularly with respect to the amount of construction work done on the highway between Millersburg and Sunbury?

A. Yes, I found the status of that whole project.

Q. Will you give us the total highway distance—

MR. MATHER:

Let's get from him with whom he talked.

WITNESS:

I talked with a gentleman in the publicity office of the Highway Department, room 511. I think his name is Mr. Washley.

Q. Will you give us the total length of that highway, and the number of miles in the various sections in their list of improvements?

A. The total distance along that road from Millersburg to Sunbury is approximately 25 miles, and of that 25 miles, approximately 6 miles had been improved up to the year, 1928. In 1929, approximately

one and a half miles more were improved, and in September, 1930, a section of improved highway from Dalmatia to Herndon, 4.38 miles in length was completed, and there is now under contract just south of Sunbury, sixty one-hundredths of a mile, leaving 12 and a half miles, approximately, still unimproved, approximately one half of the total distance.

Q. Do you know the nature of the 12 and a half miles unimproved?

A. The greater portion of the 12 and a half miles is a section approximately 8 miles in length, just north of Millersburg, and that section includes the grade crossings which have been ordered eliminated, and that is the section which I understand the Highway Department has made rather extensive studies for future improvement.

MR. HULL:

I think that's all.

Cross Examination

MR. MATHER:

Q. What do you mean by improved road?

A. I mean the surface.

Q. Either Macadam road or concrete?

A. Yes.

Q. When you say 6 miles was constructed of improved road prior to 1928, you are referring there almost entirely to Macadam road of one kind or another?

A. I don't remember whether it was Macadam or hard surface. It's shown hard surface on the 1928 map.

Q. You don't know the width?

A. No.

Q. You don't know in any sense how that road would compare with the Trail on the other side of the river, U. S. 11?

A. No.

Q. This 12 and a half miles unimproved you spoke about, do you mean to say that 8 miles of that is concrete?

A. No, eight miles out of that 12 and a half miles, approximately is unimproved road, and is the section of the highway just north of Millersburg, which includes the railroad grade crossings which have been ordered to be eliminated. That 8 miles is unimproved at the present time, but it's the section of the road which has been given considerable study by the Department in recent years.

Q. But you don't know that this 8 mile stretch, including the grade crossings, is going to result in their concreting the highway in the near future, do you?

A. No, I don't know the time. I just know that the project has been studied, and that indicates to me that it's a likely construction project in the near future.

Q. It is a likely construction project?

A. A likely construction work, would be a better word than project.

Q. You have told us it has been studied?

A. Yes.

Q. Is that the only thing from which you derive your word "likely"?

A. No, that is one reason. Another reason is, it seems to me to be sound engineering, and a thing to be expected, that when the Highway Department, or any similar organization invests a considerable

sum in a portion of a road, which won't be entirely useful until the entire roadway is completed, and the gaps closed, that state of affairs would indicate to me that it's very likely that the entire project will be carried out.

Q. Would that likelihood in your own mind be affected whether this was to be done following the proposed elimination of these grade crossings, or would it be different if you knew some other department was directing that it be done?

A. I don't think there would be much difference in the two cases.

Q. And as to the 7 and a half miles constructed up to 1928 and during 1929 of improved road, you don't know as to the width, or classification of that highway, whether it's a stretch of high crown unimproved road, or whether first class concrete?

A. No, not for that portion.

MR. MATHER:

That's all.

THE COMMISSIONER:

We will adjourn until 9:30 tomorrow morning.

Thursday, February 26th, 1931

(Hearing resumed at 9:30 a. m. in the presence of counsel for the respective parties).

LYNN B. CURRY, resumed.

Cross Examination

MR. HULL:

Q. I now direct your attention to the item in your valuation which consists of the portion of the old bridge which remained used and useful in the present structure, the item marked on your ap-

praisal, old structural items of former bridge structure, incorporated in the present bridge, $35,262. Do you have an analysis of that item?

A. I have.

Q. Will you produce it?

(Received and marked C 6).

Q. Will you tell us in point of time when you made up Complainant's Exhibit 6?

A. Following the request made for the details in the hearing in December in this case, the last hearing previous to this one.

Q. Had you not previous to that made up an estimate of the value of this item of property?

A. Yes, I had, but it was not formulated into Exhibit 6, as you mentioned.

Q. When did you first make up the data that composed Complainant's Exhibit 6?

A. That data is the data that was in the Commission's consideration of the old rate case. It was not made up by me alone, and I do not recall just what part I took in each of the operations. The basis for this Exhibit 6 is from the Bridge Company's own engineers' figures in the old rate case.

MR. MATHER:

You are referring now to Mr. Masters?

WITNESS:

Yes.

Q. I thought you testified in direct examination at the hearing at which you were first called, that you were the man who, in the previous case, had made the analysis of the valuation for the Bureau of Engineering, and made all the recommendations of that Bureau to the Commission. Isn't that the fact?

A. I was not the only man that had a part in it. I had a part in it.

Q. You were the principal person, were you not?

A. I would think that I might be considered a principal, but Mr. McIntyre and Mr. Parmalee were assigned to that in the Bureau and we reported jointly to the Chief of the Bureau.

Q. This item of $35,262.36, as you show it in Complainant's Exhibit 6, consists of four items, the first three of which are adopted from the engineers' estimates submitted in the previous case, and known in that case as Respondent's Exhibit No. 6, are they not?

A. They are the items. I don't know as to the identification which you gave.

Q. And the fourth item, contingencies, is an item that was planned by the engineer for the company in the previous case, as $3,048.73, and allowed by you in this exhibit, $1,679.16, that's correct?

A. Yes.

Q. How did you arrive at the amount of your item for contingencies?

A. In the old case, during the work of myself and the other engineers in the Bureau of Engineering, we found the bridge at that time, we made a trip up there to observe on the ground those items that Mr. Masters has listed under this heading. We three came to an agreement as to the propriety of including an item in some amount for the conditions so listed by Mr. Masters, and then in the office consideration and study, I remember that we observed that while Mr. Masters had depreciated up to that time for the first two items, which are here included, and which you have mentioned as being

in agreement, the item of contingencies had not been depreciated. That was, therefore, adjusted and corrected to the amount of $1,679.16, and that was the figure that the Bureau of Engineering adopted in its study of the old case. That same thing would hold true for my use in this valuation, because the items were depreciated at that time up to the time it was taken into the new bridge, and further depreciation is handled the same as the other items in this bridge in my valuation now under consideration.

Q. And to what extent have you depreciated contingencies in order to arrive at this figure?

A. In the same proportion as the rated average depreciation for the previous two items, with which the contingencies are related.

Q. In your opinion the intangible item of contingencies should be depreciated; so also with engineering, cost of financing and other intangible or indirect construction items. I am now asking for your engineering opinion?

A. There's one item not depreciated.

Q. What's that?

A. Organization, promotion and organization.

Q. That doesn't wear out?

A. That's right.

Q. Excepting for that, it's your opinion as an engineer, all the other overheads ought to be depreciated? A. Yes.

Q. And by overheads I mean what is classed by some as overheads, by others as intangibles, and by others as indirect construction items, all items of value, exclusive of organization and promotion, and exclusive of all tangible property, that's what I mean by overheads?

A. That certainly is true insofar as overheads that I have considered, and I don't recall any that would come within that that would be not depreciated other than those, but the definition and the use of the term you mentioned might be such that something would come up that would not be depreciated.

Q. I am not trying to catch you at all. I am trying to see whether we agree on the broad general principle of overheads that ought to be depreciated along with the tangible property?

A. In general, yes, but there is the possibility of some one thing coming up.

Q. There may be some items we don't have in mind now that for special reasons should not be depreciated?

A. That's right.

Q. But as a general rule the statement is true?

A. Yes.

Q. That's your opinion?

A. Yes.

Q. If they are to be depreciated in determining the value of the property for rate making purposes, there should be an allowance for them also in the operating revenue account for annual depreciation, should there not?

A. Operating expense account?

Q. Yes?

A. Yes.

Q. What you have given us in Complainant's Exhibit 6, and what you have included in your appraisal, Complainant's Exhibit 3, for this item, is its value as of 1925, isn't that true?

A. Depreciated reproduction cost.

Q. As of 1925?

A. Yes.

Q. And to that extent again you have not based your appraisal, Complainant's Exhibit 3, on what it would cost to reproduce this property in November or December, 1930?

A. Yes, I have, because it is my opinion that that would be the cost.

Q. It is? One item consisting of 8,000 cubic yards of earth fill is allowed in Complainant's Exhibit 6 at $1.50 per cubic yard. In your own valuation, Complainant's Exhibit No. 3, have you not allowed $2.50 as the cost per cubic yard of the same fill as of November and December, 1930?

A. I have, but I must explain that the time as you read from the Exhibit C 6, you will notice has not been depreciated by the same process as the previous two items, so that $1.50 per cubic yard is a depreciated cost, unit cost, and it appears in that manner because it is the manner initiated by Mr. Masters, and I didn't go through the process of making the change to the other manner. It was his depreciated value at that time, and you will find that it corresponds quite closely with the figures that I might put up in a different manner of computation.

Q. Has there not, in your opinion, been any increase in the reproduction cost of masonry for abutments and retaining walls between 1925 and 1930?

A. Decidedly there has not. If there's any change it is slightly a reduction.

Q. Have you prepared a similar schedule showing the manner in which you arrived at the cost of the cofferdams?

A. Yes.

Q. Will you produce it?

(Received and marked C-7).

Q. When did you make up this detail, Mr. Curry?

A. Just following the time of the request made at the last hearing.

Q. When did you assemble the data on which this detail is based?

A. At the same time the details of the data. I had not made up anything but basic information into the form of figures until you requested it.

Q. Then you didn't have figures before you for the cost of the cofferdams until I asked you at the last hearing to prepare such figures?

A. Until a later time than that.

Q. I notice in this, as well as numerous other items, Mr. Curry, you have consistently allowed only 10 per cent for contractor's overhead. Isn't it a fact that 15 per cent is the usual allowance that contractors make?

A. No. In going into detail, it's really not an allowance, it is actual cost, and after considerable experience by contractors, each one for themselves obtains a set of information that usually allows them to determine what in the past has been their overhead as expressed in percentage, and that would be different for each contractor, each contractor as his individual cost may be affected by the manner in which he carries on his business.

Q. Yes, but not widely different. It would not be a very wide difference between five competent contractors?

A. It has been my observation and experience that they are widely different in the manner of their

organizations and how they do their work, and even among contractors that you would consider to be of about the same magnitude, one contractor by his individuality and choice of how he conducts his business, appears to be able to get more economical operation with large overhead that results in a reduction of direct cost. Another one, you will find, operates with a very small overhead, and he gets compensated somewhat in another phase of direct costs. The overhead expense, of course, is always due to the part of the organization, whose sole purpose is to make the direct costs less, except, possibly for such items that are just fixed, as insurance, or something of that kind; but even that would then vary according to the amount of the payroll as affected by the economies and efficiencies that the overhead organization would produce. So that I think that there is quite a range, but I do think probably that where it varies, either up or down, it is somewhat expected to be compensated in the direct cost. It is not an item that could be tied down and say that it's almost constant in itself.

Q. In your five years experience with Gannett, Seelye and Fleming, did you find that they operated on an overhead of 10 per cent?

A. You expect that to be answered from the standpoint of their contracting operations?

Q. Yes?

A. During my experience with Gannett, Seelye and Fleming, they took only one contract on a contract bid basis, and in that case it was a small job, and the overhead was practically nothing, due to peculiar circumstances. In their operations as contractors for various clients they—

Q. In this operation were they working on a cost plus basis?

A. Go ahead, on further thought I don't suppose that it would contribute anything.

Q. I don't believe it would be parallel, would it?

A. It's my opinion not.

Q. As far as your personal experience goes, you haven't personally been familiar with the carrying through of any projects comparable to this, in which you observed the amount of overhead required, have you?

A. Not just comparable with this. Of course, I have seen many and varied studies of data of jobs from contractors, where the overhead was set forth, and the overhead items which are comparable with the overhead items that a contractor has to meet are always present in the cost plus work that I did with Gannett, Seelye and Fleming, and consequently I would know their magnitude. I also know that the magnitude of those items, as I saw them, in connection with the construction work carried on by Gannett, Seelye and Fleming, under the supervision of their Construction General Superintendent, who was in charge, was of a character that reflected that general superintendent's manner of doing business, and he was particularly a man who made the very best kind of use of what was called a high percentage of overhead, both as to the time element in completing the job, and the part it contributed to reducing the direct costs.

Q. I am wondering whether you have not answered the question?

A. I think I have two jobs here with reference to the man whom I am speaking of, the organization

that I am speaking of, that show the overheads.

Q. What kind of jobs were they?

A. The one of the reinforced concrete covered reservoirs at Shamokin.

Q. Was it a cost plus job?

A. Yes.

Q. For both of them?

A. Yes.

Q. I thought we agreed a moment ago that they would not be comparable to a job of this kind?

A. Not in total, but it shows this portion of overheads that arise out of the construction work.

Q. Isn't this the fact that before you or I would be competent to form a judgment as to whether 10 per cent or 15 per cent should be allowed for contractor's overhead, we would have to engage in a study of that subject. We would have to first find out what it costs contractors generally to do work of a like kind, and when we found that out, we could not stop there. We would have to go further and inquire into their methods of organization and management, to determine whether or not they were paying more overhead than was reasonably necessary, and not until after we had done that, could we form a judgment as to whether an allowance of 10 or 15 per cent or more or less was reasonable, isn't that true?

A. Yes, that's a different question than asking me if I know of some particular job I worked on, where the overhead was a certain amount. In response to your question now, that process of study you mention is extensively carried on among the engineering staff and members of the Bureau of engineering, under the supervision of the Chief of

the Bureau, and we did study constantly and review figures and data of that kind, and considered them in conference, and have conclusions drawn in conference, that have come to the base of determining for the use of that Bureau in just such work as this, what that Bureau feels to be the proper allowance under varying conditions with respect to utilities, that shall be used.

Q. Have you engaged in such study?

A. Yes, I have taken part in it. As I have said, they are carried on in the Bureau.

Q. Your conclusion is 10 per cent is a reasonable allowance?

A. Yes, 10.

Q. What allowance did you make for overhead, for contractor's overhead, in the previous case?

A. I can't recall at present that that came to an issue for our consideration in the analysis, other than to follow the percentages made in the case, and probably since I can't remember, it was either thought to be correct, or there was no testimony contrary, and we were studying the record at that time. In short, my answer is, I don't remember.

Q. Mr. Curry, have you examined the cost data submitted by the American Appraisal Company for the construction of cofferdams?

A. Yes, I didn't know that existed until within, some time within a week after the last hearing. Mr. Mather, one day in his office found it laid aside, and he asked me about it. I said, "Why, that is the information that was submitted in accordance with a request." So that is the time when I saw that. I did see it before I made this detail, however.

Q. It was submitted in response to a request

from Commission's counsel in this case. Now, have you examined it carefully?

A. Yes.

Q. Would you mind pointing out what, if anything, in that estimate and appraisal you think is too high?

A. Speaking solely with reference to direct costs first. I examined the basis laid down in that report, and I find that it was a very reasonable basis of the manner for carrying on that work. I had also observed at the time of the construction of the bridge, during many visits that I made just as a matter of interest on my part, that it certainly would be consistent with the way it was done, and I was convinced upon reviewing this presentation that the direct costs, and the manner of doing the work, was one very reasonable way of doing it.

Q. If I understand that exhibit, which I have identified as an appendix to Respondent's Exhibit No. 1, a detail asked for in connection with Respondent's Exhibit No. 1, I understand the Exhibit of the American Appraisal Company puts the direct cost at $26,432, and you put it at $26,499?

A. Yes, and since you have stated it in that way, I will go briefly to add what I have already said, that in reviewing the figures, I noticed on the first page a detailed—

MR. MATHER:

Detail of Mr. Johnson's figures?

THE WITNESS:

—First page marked details of Mr. Johnson's figures. The item at the bottom of the page marked Maintenance of Cofferdam, which is in the amount of $258. For the same type of cofferdam, on the third

page, he has listed Maintenance of Dam, $228. In other words, the cofferdam in its original location, and the cofferdam in its subsequent location, has that discrepancy of $30. It's a minor matter, but you asked me, and I call attention to that. In addition, I could not find any place where Mr. Johnson had made any allowance for hardware. I have allowed them hardware, and have used the same maintenance of that cofferdam, which I just mentioned, in the amount of $228 in that cost, either the original or subsequent location, and I believe that's the only difference in my detail preceding the figure which you mentioned on my exhibit, $26,499.82.

Q. So that difference in your estimate is in the overheads?

A. Yes, but in this case it's better designated as extra cost.

Q. When we come to those items, I found that Mr. Johnson made an allowance of $6,907 for general labor allocated to cofferdams; for unloading, handling and transporting plates; you make an allowance of $3,000 for that same item, do you not?

A. Yes.

Q. Why?

A. I am unable to say. After Mr. Johnson obtained his amount, the only information I have of his reasoning in the matter is his statement of what it covers. For myself, in explanation, I would point out that the amount of materials to be so unloaded, handled and transported, amounts to $13,490, approximately, as shown in my exhibit, under the head of recapitulation, and those materials consist of lumber and clay fill and hardware. It hardly seems that it would need very much further explanation

to come to a conclusion that you would hardly need for the cost of handling this $13,500 of this $13,500 of material nearly $7,000.

Q. How did you arrive at your $3,000, by a percentage basis, or just a judgment figure, or what?

A. It is practically $1.20 a ton for handling it from the cars to the site. That's not rough figures, as the lumber and clay will appear to be as represented, according to the estimates and details.

Q. Where did you figure the cars would be for unloading?

A. At the—I believe designated as the east end of the bridge the station or stop of the Pennsylvania Railroad. I think it is known as Clark's Ferry.

Q. That is on the Harrisburg side of the river?

A. Yes, that is, for all material delivered there. The material might not all be delivered, but cars of lumber, of course, I expect would.

Q. Are there any siding facilities there for unloading cars?

A. Only such as would be provided by arrangement made through the contractor for the special purpose of this reproduction of this bridge.

Q. And at the contractor's expense?

A. Yes.

Q. The contractor has to build his own siding?

A. Or pay for it if the railroad did it.

Q. Now, the $1.20 a ton would cover the cost of removing the material from the car on the Harrisburg side of the bridge, and hauling it where?

A. Hauling it to its place of use.

Q. Do you figure the cost of handling lumber by the ton?

A. Not usually, but it's expressed so here in order to get a tangible idea of what consideration I gave to the matter.

Q. It's a very rough and approximate way of estimating the cost of handling?

A. Yes, it's an overall way. I don't just call it rough.

Q. Suppose that the contractor built a siding along the railroad on the Harrisburg side of the bridge, and he wanted to deposit his material on the river bank, say for the construction of the abutments on that side, what would it cost per ton to unload the material from the cars, put it on a truck or other conveyance, and convey it to the abutment on that side of the bridge?

A. About roughly 75 cents a ton. I can hardly make intelligent or applicable answers in this particular matter, because the next item in my estimate, or another item of the question you asked covers the portion of the cost from the use of general equipment, and they are all involved in the cost and in the particular items in the cost, and I don't know whether you mean—

Q. I am asking you how much it would cost to bring a ton of material from the siding across the highway to the abutment, including all cost that would be necessary in order to effect that transportation?

A. And including the location of all general equipment?

Q. Yes, that's got to be paid?

A. It has, but you started by questioning from the one item, which is only a part, and I was attempting to answer. The item you mentioned first

that I thought you were questioning me on is headed, first, Labor, and the next item is Other Plant Cost, as differentiated from the pumping plant, that is actually covered in the details.

Q. You are right, Mr. Curry. I get your thought now, and the 75 cents you speak of would be the labor cost?

A. Yes, in attempting to answer consistently with the line of questioning as it was started.

MR. MATHER:

You are speaking now of a siding between the highway and the railroad, or a siding between the highway and the bridge head?

MR. HULL:

A siding between the highway and the railroad.

MR. MATHER:

You are assuming that the siding would not cross the highway?

MR. HULL:

Yes.

Q. Would there be any considerable difference in the labor cost of moving a ton of material from a siding to the first pier in the bridge?

A. I would not say it was material, and in attempting to respond to your question, the larger part of the cost of the labor of handling is at the unloading from the cars, or trucks, as delivered on the job, and the handling of it whatever there is at the end of its journey to its place of use. The distance to travel makes a difference in the case, but I would not say it's material. By that I mean it is a part, but it isn't a large part.

Q. Did you, either in this Complainant's Exhibit No. 7, or elsewhere in your appraisal, allow for the

cost of constructing a temporary viaduct over the highway and out into the river, paralleling the side of the piers, and extending the whole way across the river for the delivery of materials to the piers?

A. Yes, but not in as expensive, or in the same manner as it was originally done, and as I know it was done when the bridge was built. But the elements of the same program as you mentioned I did cover. Of course, the items of plant and means of transportation and facilities for general use you spoke of were useful for many purposes. It was a general facility for carrying out many operations, and it involved consideration of how much of it would be allocated to different parts of the work.

Q. I realize that would be a piece of equipment useful in the furnishing of many items of tangible property going into this bridge, and therefore, you would allocate it probably to the different items. I just want to find out whether or not in visualizing the reconstruction of this property you contemplated the construction of such a structure as the most economical way of reconstructing this property?

A. I used the term applicable, and I might just as well have used the term allocation.

Q. I think, while we have that answer, you missed my last question.

(Question repeated).

A. I did.

Q. You recall the structure which was built there by the Vang Construction Company?

A. Yes.

Q. That was the kind of structure needed for the purpose?

A. Yes, it's part of the work of the construction of the bridge, and is one that's entirely in the hands of the contractor, and it can take many different forms, according to the individual contractor's opinion as to what is best suitable, but more important than that, comes in the type of plant he has available to work with, and certain items of plant are always essential; other items of plant may be substituted. For that reason, the item of cofferdams and taking care of the water, which we are now considering, is the most indefinite one to detail in the whole valuation. You can only detail one reasonable way that might be economical and proper.

Q. In arriving at your figure of $1.20 per ton as the labor cost, what did you use as the basic rate for labor?

A. The same as I used, as I already stated it to be, 35 cents.

Q. How many hours labor did you contemplate per ton?

A. I haven't any such figure to give in response to your question, for it all depends on the balance between the machine work, the equipment, and the man power, that happened to be available at a certain time. The mechanical handling and the labor handling overlap uneconomically, and are subject to so much change you can only make an approximation, and be sure that the combination of the two kinds of cost are reasonable, because they may not at all represent how it would be possible to handle the material with half as much labor as I have allowed for, with somewhat a corresponding increase of mechanical plant costs allocated to that purpose.

Q. Have you made any estimate or computation

of the time required, of the number of hours and labor required? How did you arrive at your estimate of $1.20 labor per ton?

A. I have very clearly in my mind all the handling of materials with reference to pipe line work, and where there is practically no mechanical equipment concerned except the trucks to do the hauling, and some minor facilities for more efficient work. With the laborers in handling the pipe and materials for pipe line work, many times I have met with the cost of 80 cents per ton to handle from the cars to the site of the work within a mile range. Now, I reason from a background of that knowledge as one of my sources, and one of the things I considered. That is a check on my own figure of $3,000 to handle this total amount of materials, as shown in my recapitulation, and $1.20 for labor alone would be at least ample.

Q. This was $1.20 a ton for how many tons?

A. That was about 2,500 tons. At any rate, it's the amount of $3,000 divided by $1.20, 2,500 tons.

Q. Whereabouts in your figures have you given any tonnage figures?

A. I have not. It is possible, and I do have the rough figures somewhere, to tell from the details shown, both in Mr. Johnson's exhibit and my exhibit that that might be the approximate amount of the tonnage.

Q. Did you compute that?

A. Yes, roughly.

Q. Is that the way you arrived at the $3,000?

A. No, I used it for a check afterwards to find out really how much I was allowing, for how much per ton.

Q. I thought this $1.20 a ton was what you used in the first instance to arrive at your $3,000?

A. No, that's not true.

Q. How did you arrive at the $3,000, initially, then?

A. Just a judgment figure, first, considering both the labor and the plant costs in connection with the magnitude of the job and the use that could be made with the place with reference to other items.

Q. By judgment figure that you made, that is an estimate or a guess as to the amount which would be required, based upon original knowledge that you have from your general experience of construction work?

A. Yes, in the sense that it's not a random guess, not a guess in any sense of indefiniteness.

Q. How did you go about finding the figure of $3,500 for your next item for plant costs?

A. My presentation to you in response to the labor almost exactly answers the question as to how I compute the plant; also judgment.

Q. The same kind of figure?

A. Yes, as an overall consideration at the end of the amount of materials to be handled, the magnitude in dollars of the materials in the sense that it reflected the quantities, by working from that, and covering a recheck as to tonnage, and reasonable figures for handling, from the $3,000 indirect cost for labor, and $3,500 for the allocation of general plant costs, and then just to make it doubly ample, I have put in the item of miscellaneous of $1,550, because I realized this was so indefinite to tie it down exactly. I think it is only proper to allow that item of miscellaneous under those cir-

cumstances.

Q. Can you tell us how much of the $3,500 represents the erection of the temporary viaduct that was constructed by the contractor?

A. No, not in the sense of a definite amount. Even the contractor himself, if he wanted to allocate this cost at the end of the job, with the best of records, would have to be somewhat arbitrary about it.

Q. I realize that. Here again you have used an overhead for the contractor of 10 per cent?

A. Yes.

Q. Will you produce the estimate that you made of the cost of constructing the viaduct, or bridge, across the highway out into the river, paralleling the piers, which the contractor, in reproducing this bridge, would construct?

A. I don't have that.

Q. You don't have it?

A. Do I understand your question as to the contractor's plant equipment was—

Q. A part of the equipment, which we agree should be provided or constructed by the contractor is a trestle viaduct, or bridge, from the Pennsylvania Railroad on the Harrisburg side of the bridge, across the highway, out into the river, the whole way across paralleling the location of the piers, for the purpose of enabling the railroad to make delivery of materials out on the river; and also for the purpose of enabling the contractor to carry other materials back and forth to the job. Now, I understand we agree that such a trestle should be constructed by the contractor in order to reproduce this bridge under efficient construction conditions. Now, I ask you to produce your computation of the cost

of constructing that trestle work?

A. I did understand your question. I have no such computation.

Q. You understand I am not asking you to produce any statement of what it cost the Vang Construction Company to construct?

A. Yes.

Q. But I am asking you to produce your estimate of what it would cost a contractor to reproduce that structure?

MR. MATHER:

Are you asking him to produce something already made, or something—

MR. HULL:

I am asking him to produce something already made.

MR. MATHER:

He answered you that he has not.

MR. HULL:

I wanted to be sure that we were talking about the same thing.

Q. You never made such a computation?

A. I did not.

Q. What was the quantity of reinforcing steel bars used in the construction of the Columbia-Wrightsville bridge?

A. What was the question?

(Question repeated).

A. I don't have the information as to what was actually used, but I do have the tabulation of bids, which show the amount contemplated.

Q. What is that amount?

A. 7,991,000 pounds.

Q. What was the amount used in the Clark's

Ferry bridge?

A. 1,079,718 pounds.

Q. It is the fact, is it not, that you could purchase under contract 7,991,000 pounds of steel bars for reinforcing at a less cost per ton than you could purchase 1,079,718 pounds?

A. It's my opinion that you could purchase it for slightly less. The point at which a further reduction in price because of quantity may be expected is reached somewhere in the neighborhood of three-quarters of a million pounds of steel. When the quantity involved gets as high as 375 tons, which is the same amount in pounds, the furnishers of such material have reduced the price to almost an absolute minimum. There is, however, in my opinion a further slight reduction that would be made in order to get the orders for seven times as much.

Q. For seven times as much?

A. For seven times as much, but they are slight.

Q. What kind of steel bars were specified for the Columbia-Wrightsville bridge?

A. I do not have that information.

Q. What kind of steel bars were specified for the bridge at Clark's Ferry for use in that bridge?

A. It's difficult for me to remember that. There's nothing regular, as I remember it now, in the bridge specifications for steel bars. It was bars to be rolled from Billet steel. If there's anything more, I don't hold it in mind now.

Q. You can get reinforcing steel bars rolled from rerolled rails, or other material than Billet steel for less money, can't you?

A. I believe so. I never had any experience to my knowledge where that was used. It stands to

reason that you could.

Q. Will you give me the detail of your unit cost for reinforcing steel bars?

A. This is the details of the unit cost per pound. First item, 1.8, cost of steel f. o. b. cars, .5 unloading and storing, 1.3 handling and placing, 18 mills being 5 per cent of the previous items for miscellaneous, and contractor's overhead amounting to .378 mills, and .4158 mills contractor's profit.

Q. That's 10 per cent?

A. 10 per cent of the previous items?

Q. Yes?

A. That totals .045638 cents.

Q. You contemplated the purchase of steel where?

A. Anywhere on the market, steel jobbers. I expect that would be the lowest price that would be offered probably from reinforcing steel jobbers.

Q. And you didn't have a particular locality in mind in basing your price?

A. I knew where it would be available, but in the end the price is controlled by the competition of the various people interested in suppyling the steel.

Q. What was the price per ton, or did you have the figures per ton?

A. I have it in cents per pound cost delivered.

Q. I just wondered whether you have figured it per ton, or whether I would have to figure it. It would be $36 a ton, wouldn't it?

A. Yes.

Q. Have you any quotations on steel delivered, f. o. b. at that figure?

A. No.

Q. Your cost of material is approximately 40

per cent of your total unit cost, isn't it?

A. It's the ratio of 4.6 cents to 1.8 cents. My figures don't seem to work right.

Q. It's less than 50 per cent, and it looked to me to be about 40. Never mind?

A. But I believe it is. The ratio shows 1.8 to 4.6.

Q. I want to direct your attention to the detail you gave us of your unit figures for item No. 10, which is 1-2-4 concrete in the arch rings, retaining walls, abutments, cross walls, etc. You show an item in there of 8.50 labor for placing forms. What did that include?

A. That statement of the item doesn't seem correct to me. Will you read that?

Q. Page 246 of the record, in response to Mr. Mather's request for your breakdown of your unit cost of $26, you testified that "the figure of $26 is made up of 6.25 for forms, 6.70 for material, and labor and placing, etc., 8.50. These three component parts total 21.45, to which I have added for the contractor's overhead 10 per cent, or 2.15." As you testified to it there, I understand the $8.50 to be labor in placing the forms?

A. That's not correct.

Q. Then what is that?

A. Labor in placing and finishing the concrete materials, the aggregate. The forms is lumber, and labor for forms only in the amount of 6.25.

Q. 6.25 covers material and labor for forms, does it?

A. Yes.

Q. How much is it for material?

A. I could not very well break that down defi-

nitely. It is common practice to keep the form cost in one unit. Necessarily there are elements into which it could be separated but it's not done.

Q. You have your material, that's one thing. You employ carpenters to construct your forms. That's an entirely different thing. You have broken down the cost of other materials, between the actual cost and the cost of handling it. Did you not do the same thing with your forms?

A. No.

Q. Why don't you?

A. Because it's been the practice to do those things in a different manner.

Q. Whose practice?

A. Common practice with much of the data we have and received. It's the same basis that Mr. Johnson used in his detail.

Q. Mr. Johnson gave us 6.04 as material for the forms and $2 for the labor of building the forms?

A. That's not correct. That's not the information that I have.

Q. That's his testimony. If you have no breakdown of that between material and labor, can you tell us how you arrived at the 6.25?

A. That's from my experience and cost data that I have. I have the cost data of some of the jobs that I know of here, and the analysis of cost are put up in just exactly that manner.

Q. You are referring now to particular jobs which were done by Gannett, Seelye and Fleming, that you have before you?

A. Yes.

Q. Was there labor and material for constructing forms in those estimates?

A. They are not estimates. They are records of cost.

Q. That's what I mean?

A. Yes.

Q. Will you let me know what the unit prices of the labor and material for forms was in those contracts?

A. This was at the reservoirs that I have already mentioned, which I handled in Shamokin, 6.45.

Q. 6.45?

A. Yes, that was a particularly difficult piece of form work.

Q. What was the other, you have another one before you, do you not?

A. 3.40.

Q. What job was that?

A. That was known as dam number 6 of the Roaring Creek Water Company at Shamokin. That lower costs reflects the type of forms necessary for the spillway.

Q. When was the Shamokin reservoir built?

A. 1924.

Q. When was this dam No. 6 built?

A. 1924.

Q. What was the cost of carpenter labor in November, 1930?

A. I will not be able to give that. I hesitated in attempting to recall the matter, but I don't know what would apply in this reproduction cost of the bridge in 1930. My manner of arriving at my conclusions are not based on the absolutely unit cost per hour of a carpenter.

Q. Didn't you have before you made up your unit costs for the construction of forms, as well as

the other items of your appraisal, didn't you have the labor costs per hour of the different kinds of labor necessary?

A. Not the different kinds. It's tied in with the labor days of common labor.

Q. You mean to say that you used the figure of 35 cents as the average labor price for building the forms just the same as for dumping concrete?

A. No.

Q. Then what do you mean by saying it is tied in with the price of common labor?

A. My cost data on form work include the labor. It does not indicate the unit cost of the carpenter per hour, the cost of the carpenters' wages, but it is compiled in the form of dollars per cubic yard of concrete.

Q. When you are figuring labor costs, you go back to the standard unit of so much per hour, but you have got to start there with your labor computation, somebody's got to start there?

A. I don't know the cost of a hub cap, but I know what the price of a Ford is.

Q. You are not undertaking to prepare and submit an itemized reproduction cost of a Ford?

A. No.

Q. But if you were you would know the cost of a hub cap?

A. Not necessarily.

Q. You would be expected to, I believe?

A. A knowledge of the whole unit is not dependent entirely on the price list of the parts.

Q. Did you, or did you not, have before you when you made up this appraisal, a schedule of labor prices, and as of the time that you made your appraisal of the Clark's Ferry bridge?

A. Yes, insofar as it is. Exactly what I had was the rates per hour common labor at different years, and particularly the year 1930, together with the indices that make it possible to use those figures to determine the unit costs of item construction.

Q. You have told us already that in November, 1930, at the time you made your appraisal, common labor was cheap?

A. Yes.

Q. Do you know whether or not in the unusual conditions of the labor market, which prevailed in November, 1930, carpenter labor was cheap also?

MR. MATHER:

I object to that question.

THE COMMISSIONER:

Let the witness explain what he did.

(Question repeated).

A. I have this much information before me, although not used by me at this time, a chart showing the relative fluctuations in basic prices of the American Appraisal Company. That indicates that labor cost dropped off materially in 1930.

Q. In 1930?

A. During 1930.

Q. How did the decline in the price of carpenter labor compare with common labor, if the chart shows it?

A. It does not show it. It shows a composite plot of the building trades for 24 cities.

Q. You really are not in a position to answer the question that I have asked?

A. No, I am not. I have some information on it, but I have not given any particular study with regard to that work along that line, and any response I make will entirely be an attempt to answer from

what data I have.

Q. The accrued depreciation, which you estimated in your appraisal, amounting to $41,403, is a mathematical computation based on a certain sinking fund method, is it not?

A. That is exactly what it is in amount.

Q. Can you tell us whether or not it would require $41,400 now to restore the bridge to 100 per cent condition?

A. I made no study of that matter.

Q. In the life of this structure, is it not true that actual depreciation is much less in the early years of the life of the structure than in the later years?

A. I think that might be said to be generally true.

Q. That's generally true of all construction work, isn't it, depreciation proceeds more rapidly as the property becomes older?

MR. MATHER:

Are we talking about depreciation or the outward results of it?

MR. HULL:

Accrued depreciation.

THE COMMISSIONER:

He has already answered it in a former question.

Q. The 4 per cent sinking fund method of computing depreciation charges off the accrued amount in the first year of the life of the structure, does it not, and the amount charged off in each succeeding year decreases, doesn't it?

A. No.

Q. Do you have the figures from your analysis of this property in the preceding case, on which you base your allowance for annual depreciation?

MR. MATHER:

I think I will have to object again on the ground that Mr. Curry has testified he made no analysis.

THE COMMISSIONER:

I think that's correct, but he may answer it, it's proper cross examination.

A. I don't think I alone made such a determination.

Q. Did you take part in it?

A. I was one of the three that were working together on the analysis of that record. I am sure that there was no recommendation that came out of the Bureau of Engineering that showed my recommendation at that time, aside from the way it was just a part of the discussion, in the combined work of the three men, but no record of it.

Q. Did your Bureau not make a recommendation to the Commission on the matter of depreciation in the preceding case, annual depreciation, I mean?

A. I expect it did, but I can't answer now.

Q. I think I asked you at the last hearing to look up your record with respect to that, and be prepared to tell us. Didn't you look at the record?

A. In looking up the record, I found that the Bureau staff of the three men under Chief Snow made a study, and that for the three men who worked together, one of them made a report to the Chief of the Bureau, and I myself made a memorandum report to the Chief of the Bureau on certain phases. It was entirely my own, and it didn't include the matter of the figures for recommended depreciation. The report that was made to the Commission from the Bureau was written by the Chief of the Bureau of Engineering from the same thing, the two reports I mentioned, and laying down a complete

basis of his own with these two reports standing behind it.

Q. Do you or not concur in the finding of your Bureau as to what the actual depreciation should be allowed. You can say yes, or no. Don't you remember that?

A. There are figures suggested on different bases. How can I answer?

Q. Was it yours?

A. I had none in there as my own alone.

Q. Then do I understand when the Bureau of Engineering made this report to the Commission, there was laid before them the different allowances for annual depreciation?

THE COMMISSIONER:

No, he didn't say that.

A. There are conclusions arrived at under the Bureau's assumed conditions, and two figures in the report.

MR. MATHER:

I object to any further cross examination as to what our engineers, as advisers to the Commission, advised them.

THE COMMISSIONER:

I think we have gone about as far as we should go in this direction. The witness says he did not make any such recommendation to the Commission.

MR. HULL:

I should like to ask Mr. Mather, as attorney for the Commission, which stands in the position of complainant here, to produce the recommendation of the Bureau of Engineering made in the former case to the Commission, on the matter of the annual depreciation.

MR. MATHER:

As attorney for the Commission, I don't deem that these records are material. They cannot be the expression of the engineer's own thoughts, only a resume of the other engineers' decision.

THE COMMISSIONER:

I think it ought to be produced.

Q. You have not since yesterday had the opportunity to prepare the detail of cost of financing, which I asked you to prepare yesterday, have you?

A. I have not.

MR. MATHER:

Mr. Curry produces the details of the electric lighting facilities and miscellaneous bridge appurtenances as requested by Mr. Hull at the former hearing.

(Received and marked C-8).

Q. What in your opinion would be a fair and reasonable allowance for annual depreciation on this structure?

A. I am not prepared to answer that.

Q. What in your opinion would be a fair allowance for an annual charge to take care of obsolescence on this structure. Are you prepared to answer that?

A. It's only reflected in my accrued depreciation as a whole. It's not analyzed, or detailed, so that I ever have put that into the amount of money, or dollars.

Q. I was not talking now about accrued depreciation. I was talking about an annual allowance for obsolescence?

A. I have made no preparation on that phase.

MR. HULL:

That's all we have with Mr. Curry.

Redirect Examination

MR. MATHER:

Q. In regard to the Gannett, Seelye and Fleming firm and your association with them, you seem to have made some distinction between constructors and contractors. What is that distinction, does a constructor have anything to do with the designing of a plant as well as the building of it?

A. Not by the fact he is constructor, but he may do both.

Q. What is the distinction between the two terms?

A. As used by them, and as intended by me, it is an agency relationship with the owner to construct at his cost, with a fee or percentage as payment to the agent.

Q. And in addition to doing that sort of work, that firm also designed various structures?

A. Yes, before they ever began their career in the capacity of constructor or agent for owners.

Q. They were primarily designers and supervising engineers?

A. Yes.

Q. I think you today said they maintained a valuation department?

A. During the time I knew of them, and was employed by them; I could not say whether this was so yet, or not.

Q. Then did you or not have experience in valuation work of the same type as the American Appraisal Engineers have done here, while you were with Gannett, Seelye and Fleming?

A. Yes.

Q. How long ago did you leave Gannett, Seelye and Fleming?

A. About August, 1925.

Q. In your work with the Public Service Commission, what has been your contact in regard to similar statements by engineering firms as to cost?

A. It is the large part of my work that comes in contact with those things, and many such data pass before me, and for my consideration and use, and for the accumulation of useful data as well as making determinations for particular purposes. I have already recited in examination from Mr. Hull that we consider such things in conference among the staff members of the Bureau, and for the Chief of the Bureau, individually and collectively studied and analyzed and used.

Q. So that, as I understand you, you can say that while you yourself have had no experience with a case of promoting new and independent enterprises, you have the secondary evidence from the opinion of other engineers?

A. Yes, not only engineers, but promoters and organizers, and while I can't say I ever organized a new company myself, I have been standing close by and observed them.

Q. You made your appraisal some time in December, 1930, I will state December 20th, 1930?

A. That's right.

Q. And you figured your construction period as about a year. Your promotion and other periods prior to that, is, as I recall, a rather indefinite time. Will you tell us how these periods of time affect the use by you of a price at any one spot date?

A. In the physical property, I have already stated that I did not take account, or give full influence to the extreme depression that was being, and is now being experienced, in that I didn't allow the extreme

prices for labor and material that in some instances I know had actually been experienced. It would be hardly proper to take the extreme low figure in a depression time. The trend is very much more significant within short spaces of time. The reproduction cost program basis, in my opinion, as I notice it used, doesn't strictly contemplate the meeting of spot conditions as to prices or conditions in which companies will be permitted to finance, or contractors to build.

Q. You apply that principle both to the financing as well as the construction?

A. Yes, because any—

Q. How would that affect your allowance on the cost of financing, for instance?

A. I would not expect the financing to be done in a time that was extremely inopportune within a reasonable range of the time under consideration, no more than I would expect to construct the bridge structure itself at an inopportune time like the winter time, or flood time. To that extent, the cost of financing, as used by me, would not anticipate the financing of a project at a time that was not usual and proper for doing so.

Q. In line with that principle, how far would you assume that the date of financing might be delayed, or pushed ahead, to take advantage of good conditions, or to avoid bad conditions in the market?

A. A year, or not more than two years, because beyond that point it indicates to a greater extent the development of the trend.

Q. I show you your detail of old structural items, which we have marked Exhibit C-6. On that ex-

hibit; in the second line, is the retaining walls. First, by the way are the two abutments. Will you just tell us where they are and what they are?

MR. HULL:

It's already in the record.

A. With relation to the new bridge, they are upstream from the new bridge, and on either side of the river, adjacent to the end abutments of the new bridge, part on one side and part on the other.

Q. Are they essentially a part of the new bridge?

A. Not in the sense that they conform to what would have been probably proper designing for a new structure to do the same thing as these old structures.

Q. As I understand your last statement, you mean to say that these abutments and retaining walls are second-hand stuff that was there, and was used because it was there, and would not be used in their present form if they had to be constructed new?

A. Yes.

Q. In reference to the siding, which has been discussed this morning, do you know what sort of a siding was constructed when the present bridge structure was built?

A. To a considerable degree I recall just what it was.

Q. Where was it?

A. It was a siding that led from the railroad main line, or the first siding off the main line, I don't know which, but that's a mere detail, at a point near the station, that trestle work crossing the highway and reaching out over the river on the down stream side of the site for the new bridge.

The rails passed at right angles to the center line of the new bridge, and the siding leading from that railroad extended through a course around to a position at this end, which was in line with the new bridge, the new bridge center line.

Q. Did the railroad siding, suitable for railroad freight cars, go out over the water. I don't know, I am asking for information?

A. It changed during the process of the construction somewhat, and in making my answer I am not sure but what it went out over the river slightly, but in no great manner did it cross the river as a railroad siding on which flat cars direct from the railroad were transported.

Q. Without considering directly what was done in 1924 there, what sort of a siding have you contemplated would be built in arriving at the unit cost which you used in making up the reproduction cost of this property?

A. A siding that would be practically the same as that siding.

Q. As I understand you mean not crossing the river to any material extent?

A. That's right.

Q. When Mr. Hull cross examined you as to the costs of hauling bridge material, or other material, across the road by truck, was he, or was he not discussing a situation and method of doing business which you had considered in making up your figures?

A. No.

Q. In regard to the use of re-rolled railroad rails as reinforcing steel, did you consider the use of that sort of steel in your estimate?

A. No.

Q. You did not?

A. No.

Q. Your allowance of 4.6 cents a pound contemplates the use of new rolled Billet steel, I think you said?

A. Yes, Billet steel.

Q. Is it common to use re-rolled rails?

A. Not so far as I know. I don't know of any.

Q. You don't know of any bridge that has been built of them?

A. No.

MR. HULL:

What was that question and answer?

(Question and answer repeated).

(At this point a luncheon recess was taken until one-thirty o'clock, p. m.)

(Last question and answer repeated).

Q. You have a number of various items on the data to which you referred awhile ago of other bridge structures that have been built in the last three or four years. Will you just give us them briefly, starting with the most recent?

A. A ribbed arch bridge, East Providence Township, on State Highway route 39. The reinforced concrete arch bridge in Lancaster County.

Q. In regard to these bridges, as you give them, suppose you give us the number of pounds of steel and the unit price while you are doing it. You might as well give us the cubic yardage of arch concrete and the unit price there?

A. The bridge on route 39, the concrete, 1-2-4

mix for arch and deck was 29.40 per cubic yard for 2190 cubic yards. There were 768,346 pounds of steel reinforcing bars, unit price of .0485 cents. The next structure is the reinforced concrete arch bridge in Lancaster County, on route 332. The deck concrete was 1290 cubic yards; unit price 22.65. The reinforcing bars was 141,600 pounds, 4 cents. The next structure is the arch bridge in Erie County, Mill Creek Township, route 696. The concrete was 2,638 cubic yards, $25 per yard. The reinforcing steel bars was 120,164 pounds, 4 cents per pound. The reinforced concrete arch bridge in Lehigh County, route 175, section 8, included 1,450 cubic yards of this concrete at $22 a cubic yard. There were 241,347 pounds of reinforcing steel bars at a unit price of 4.5 cents. The reinforced concrete bridge in Indiana County, in East Wheatfield Township—

Q. Isn't that the bridge that you said you thought was not comparable. I will say to Mr. Hull that the steel was 3 cents?

A. It's comparable when you know it's a different type of bridge, and therefore has some reason for the change of price.

Q. All right, suppose you include it?

A. State Highway route 337, section K-3. Had 300 yards, cubic yards of this kind of concrete at $22 a cubic yard. There were 163,536 pounds of steel bars at a unit cost of 3 cents per pound. The reinforced concrete arch bridge in Indiana County, State Highway route 189, section 3, had 800 cubic yards of concrete at $22 a yard. There were 90,033 pounds of reinforced steel bars at a unit cost of 5 cents per pound. Those structures are all ones

where bids were let during 1930.

Q. Will you tell us about the Coplay-Northampton bridge?

A. The Coplay-Northampton bridge was let and under construction in 1930.

Q. First tell us what the bridge crosses?

A. Crosses the Lehigh River, Lehigh Valley Railroad, the Central Railroad of New Jersey, and the canal between Coplay and Northampton. The quantity of steel reinforcing bars, 50,000 pounds at 4 cents a pound. The arch ribs and deck sections were considered separately, and there were 1,031 cubic yards of concrete in the deck at $25 per cubic yard. There were $1,275 cubic yards of concrete in the arch ribs and the unit price for that was $16 a cubic yard. The Coatesville bridge, constructed in 1930, over State Highway route 142, west of Coatesville, Pennsylvania.

Q. You don't mean that do you; carrying the State Highway over the railroad?

A. Yes, that's what I intended. It carries the State Highway over the Pennsylvania Railroad. That bridge had 137,000 pounds of steel bars reinforcing, at 3 cents per pound. There were 250 cubic yards of concrete in the deck at $25 per cubic yard.

Q. What's your next one?

A. The Erie County bridge built by order of the Public Service Commission in 1930, had 49,000 pounds of steel bars reinforcing at 5 cents per pound. The Columbia-Wrightsville bridge in 1929.

Q. We have already covered that, haven't we?

MR. HULL:

Q. How about the concrete in this Erie County bridge?

A. This bridge has 47 cubic yards of that type of concrete in it. It is a slab type, not an arch type, $19 a cubic yard.

Q. Forty-seven yards?

A. Just a moment. I have to correct that price. The unit price is $21 a cubic yard. I must correct the unit price for the steel. I gave you the second lowest bidder. The lowest bidder is 4.5 cents.

MR. MATHER:

Q. What is your next bridge, Mr. Curry?

A. Skipping the Columbia-Wrightsville bridge?

Q. Did we cover the steel of that or the concrete?

A. If I remember rightly you were putting that in at the close?

Q. The concrete in the Columbia-Wrightsville bridge?

A. Twenty-two thousand one hundred cubic yards of concrete in the arch ribs, $24 per cubic yard. Twenty-five thousand eight hundred and sixty cubic yards of concrete in the floor system, $20 a cubic yard. Fourteen thousand four hundred cubic yards in the other part of the deck at $18 a cubic yard. No, that's not true. There's the one, 22,100 cubic yards, that's the right amount, $24. The two other statements refer to another bridge. Twenty-five thousand eight hundred and sixty cubic yards is correct. The Tillman Street bridge in Lebanon, built in 1928 has 1,700,000 pounds of steel at 5 cents per pound. That has 14,400 cubic yards of concrete in the deck at $18 per cubic yard.

Q. This one is rather an odd-looking thing. Will you read what these unit prices are for the steel all the way across all the several papers?

A. The low bidder is 5 cents a pound. Four and five-tenths cents, 4 cents, 4.5 cents, 4 cents, 4.7 cents, .0395 cents, 6.5 cents, 5 cents, 6 cents.

Q. What was the quantity of concrete needed in this bridge?

A. Fourteen thousand four hundred cubic yards at $18 per cubic yard for the low bidder. In the Tacony-Palmyra bridge, 1928, there were 22,000 pounds of reinforcing steel bars, 5 cents a pound. In that case I am not giving the concrete because it is not applicable.

MR. HULL:

Q. Why is not the concrete comparable?

A. Not to the type used for the forms. I will give it if it is desired.

MR. MATTHER:

Q. Next?

A. Likewise for the first contract on the Memorial Bridge here in Harrisburg, there were 800,000 pounds of reinforcing steel bars. The unit price was 4.25 cents a pound in 1926. In the Heimer bridge, Pennsylvania Highway Department, 1927, there were 913,000 pounds of reinforcing steel bars at 4.75 cents per pound. That's an arch bridge, and the arch concrete was 5,091 cubic yards at $25 per cubic yard. In the Northumberland bridge, 1924, there were 734,000 pounds of steel, at a unit price of 5 cents per pound. There were 5,288 cubic yards of arch concrete at $28 per cubic yard. In that same year, in 1924, in the reservoirs that I constructed at Shamokin, there were 627,000 pounds of reinforcing steel bars, and the cost without contractor's profit was 4 cents per pound. There were 3,892 cubic yards of 1-2-4 concrete at $19.87 per cubic

yard, cost, not including any profit.

Q. The corresponding bid sheet for this bridge is already in evidence, and, of course, that is a separate item for cofferdams and taking care of the river. Do any of these other structures have a separate item for taking care of the water?

A. No, they do not, it's all distributed through the unit cost of the items of structure.

Q. Insofar as these have been structures over water, the Tacony-Palmyra, the Northumberland, and Columbia-Wrightsville?

A. Most every one of these other bridges will be over water to some extent.

Q. As you have made an estimate of cofferdamming at $41,000 or $42,000, as I recall, how is that allowance. Is it larger, or smaller, or how does it affect your allowance for the various items that are done above the water?

A. In a large measure, the work of taking care of the water, and as provided for in this estimate, and in the manner the work was done, furnishing the foundations and bases on which the materials delivered, and the work done in the superstructure of the bridge, and in the piers, in a manner that didn't require any special particular preparation for the placing of the other items of the contract bid sheet. To that extent it reduces what the unit prices of items in the bridges over the water would be had there been no allowance for taking care of the water.

Q. I think you prefaced it by saying in a large measure. Do you mean to say it doesn't do it completely?

A. It doesn't eliminate the fact that there's still

water flowing along the side, but it provides in one sense, facilities all ready for use that are applicable and helpful in the operations of building the items of the structure, other than taking care of the water; and in another sense, there is the possibility of losing tools, and being slightly inconvenient for the workmen, etc., because of the fact that they are still working over the water; so one will offset the other, so that it doesn't completely eliminate the factor, but it takes care of it in an offsetting way.

Q. Would you consider these various other items you have mentioned here as being entirely comparable with this bridge?

A. Not by considering them and setting one up against the other, but with these things as to location, type of bridge, and year built, and other characteristics, with proper considesation of all the factors then you may compare them.

Q. What would you say they indicate as to what is a reasonable allowance for the two items you have been discussing for the construction of the bridge at Clark's Ferry, of the type now there, at a time now, and for the next year?

A. They indicate that the unit prices used by me in my valuation are ample.

Q. Would you say in any way they justified an allowance for steel specifically of 6 and three-eighths cents a pound?

A. No.

Q. Can you see anything in the Columbia-Wrightsville bridge particularly that might justify a bid of 6 and three-eighths cents?

A. No.

Q. I show you a photostat of what appears to be a notation as to the bids on this Columbia-Wrightsville bridge over the Susquehanna River. Tell us exactly what it is?

A. It's a photostat of a publication by the Engineering News-Record, entitled Construction Cost 1910-1929. It is by its own statement a copy of the tabulation of bids on the Columbia-Wrightsville bridge, as published in the Engineering News-Record in the issue of July 4th, 1929.

(Received and marked C-8).

Q. I show you another photostat, which is marked at the top P. S. C. Pa. C4704 Columbia-Wrightsville bridge, identified as exhibit C-9, will you tell me what that is?

A. It's a photostat of the tabulation of bids submitted to the Engineering Bureau of the Commission by the contracting owner.

(Received and marked C-9).

Q. And this bridge is a bridge built in accordance with the Commission's order and built under the authority of the Commission?

A. Under the plan number proposed, as shown on the sheet.

Q. Is it correct that these two are the only concrete bridges of any size built over a river in Pennsylvania in the last two years say, the Columbia-Wrightsville and Coplay-Northampton?

A. I believe that is true.

MR. MATHER:

I offer in evidence the exhibit that has been identified as C-6, the details of the old structural items of the former bridge. C-7 the details of the cofferdams and taking care of water. C-8 this bid sheet

of the Columbia-Wrightsville bridge, and C-9 the bid sheet of the Coplay-Northampton bridge.

MR. HULL:

We have no objection to Plaintiff's Exhibits 6 and 7. We object to the Complainant's Exhibits 8 and 9, for it has not been shown by the witness, nor otherwise, that the figures there are at all material in determining the reproduction cost new of the Clark's Ferry bridge. They refer to other places, with other local conditions, and can't assist us here in determining what the cost of material and labor would be at Clark's Ferry for the purpose.

THE COMMISSIONER:

We will admit them.

Q. For the sake of Mr. Hull's peace of mind, did you, or did you not say that you considered that the increased quantities in the Wrightsville bridge would indicate somewhat lower prices would naturally pertain than at Clark's Ferry?

A. To a limited extent, as I explained in detail, but as the quantity went up beyond the three-quarters of a million mark, the decrease would become smaller.

Q. And the Coplay-Northampton bridge, on the other hand, being smaller than Clark's Ferry, would normally be the other way?

A. Yes, that's the exact tendency.

Q. In regard to the accrued depreciation, I think you testified in answer to Mr. Hull's question that the amount you determined was specifically obtained by application of the 4 per cent sinking fund method. Will you tell us on what you based your

opinion that this amount, roughly $40,000, was a fair and approximate extent of the depreciation which has already occurred in this structure?

MR. HULL:

That's repetition. The witness has already testified on direct examination.

THE COMMISSIONER:

My impression is he said so; if I am mistaken about it, and if he wants to correct it, he may ask him.

Q. Tell us what you were endeavoring to say this morning in answer to Mr. Hull's question?

A. I said the exact amount of money was actually determined by a computation.

Q. Will you tell us on what you based your opinion that the mathematical calculation produced a reasonable result, and to your mind a correct result?

A. Based on my observation and information that I have, and my own particular knowledge of that bridge and what I have seen, and what I conclude will be the characteristics of the bridge in its life, it's not true to say that accrued depreciation would be based solely on some rule of computation. The basis behind the rule is the application of the proper elements in the computation, which leads to a determination of the life expectancy.

Q. With regard to this sinking fund method, the sinking fund method, as I understand it, is a setting aside of reserve for depreciation?

A. Yes.

Q. Does that contemplate an annual addition to the principal of that fund, which will be equal each year?

A. Yes.

Q. To the fund?

A. An addition to the principal of the fund, not considering for the moment as to how or where that addition comes from.

Q. The fund increases in ever-increasing amounts each year?

A. So the first year would be the smallest amount.

Q. So that the direct opposite is true, as dealing with the question Mr. Hull asked you this morning, was not the first year's amount the largest?

A. Yes.

Q. As to your annual depreciation, Mr. Curry, I believe you said this morning you had expressed no opinion as to what that allowance would be?

A. I said that I had not prepared myself on annual depreciation.

Q. Have you any data at all on the subject, and if so, what?

A. I know any consideration, any proper consideration of the subject of annual depreciation, would take into consideration the same elements of observations of conditions, resulting in a life expectancy of 45 years for this bridge.

Q. Is that as far as you want to go in that respect?

A. I believe so.

Q. In regard to these labor rates, as to which you were examined at the last hearing by Mr. Hull, I show you a large sheet of paper, which has been marked C-10, and ask you what it is?

A. This is a tabulation, under the title of Price Trends of Common Labor, local, 1924 to 1930, in-

clusive. It covers labor costs as shown by the records in the Pennsylvania Department of Highways for work being done in six years in Dauphin, Perry and Cumberland Counties.

Q. You obtained that data from where?

A. From the original records in the Pennsylvania Department of Highways.

Q. It was taken off by men who were placed at your disposal. Tell us how it was gotten?

A. It was taken off by myself on this sheet from records they produced for me at my request.

Q. Will you tell us what it shows as to the rate of labor in Dauphin County, for instance, this top line?

A. The top line is a set of data from monthly *summaries, records* kept by the cost engineer. Wherever there are two rates given, there has been some work under one rate and some under another. That's true for all instances under that head.

Q. That shows from 1925 to 1927 it was 40 cents?

A. Yes, 1928 it was 35 cents.

MR. MATHER:

I will offer it in evidence.

(Received and marked C-10).

MR. MATHER:

The respondent company in this proceeding has been submitting to the Commission for the last year and a half, monthly statements of operating revenue. These statements were filed, or are being filed by the company in response to request made by Chairman Ainey during the hearing of docket 8002, and have been filed in the record in that case. I would request that they be directed to be made a part of the record in this case, in order that the

data as to revenues be brought up to date in this proceeding. The last thing that we have is January, 1930, in Mr. Keen's report; and we would like to have the company continue to file this until such time as this case is finally closed.

THE COMMISSIONER:

Is there any objection?

MR. HULL:

We have no objection to the use of those figures.

Q. I show you another sheet the same size as No. 10, this to be marked Exhibit C-11. Will you just tell us briefly what that is?

A. It is a sheet of data compiled by myself. The title is quite self explanatory. Price Trends of certain materials during the years 1924 to 1930, inclusive. The sources of the data are explained. In the column at the left, that describes the various items of materials, for which price data is given in the table. It also includes Engineering News-Record construction cost index data, as shown in the column to the left, and figures given across from the table. It has similar index data from the American Appraisal Company's published publication; and the matter is reprinted in the Engineering News-Record and the publications of the United States Department of Commerce. Last on the sheet is another set of data on steel bars from the publication "Iron Age."

Q. Were both of these exhibits last discussed compiled from data which you had used in making up your own estimate?

A. Yes.

MR. MATHER:

That's all.

MR. MATHER:

If I have not offered C-10 and C-11, I will do so.

THE COMMISSIONER:

They will be admitted.

MR. HULL:

I object to 10 and 11, unless we have some further explanation to show their materiality. We think it's entirely immaterial.

THE COMMISSIONER:

We have admitted them, so they will be given the weight they are entitled to.

Recross Examination

MR. HULL:

Q. Your Complainant's Exhibit 11 indicates a maximum price per pound for steel reinforcing bars, 2.4 cents?

A. Yes.

Q. And the maximum price since September 1st, 1929, is 2.5 cents per pound, isn't it?

A. Yes, as shown in this table.

Q. Will you explain why you used a unit price of 4.6 cents per pound in the face of this exhibit. Isn't it because you recognize the fact that the circumstances and conditions, which indicated the prices as shown on Complainant's Exhibit No. 11 were entirely different from those that would prevail in the reproduction of this bridge?

A. No, I think not. I think that's the wrong impression.

Redirect Examination

MR. MATHER:

Q. Is the 2.5 cents a pound shown on this sheet for the same thing you show your 4.6 in your estimate?

A. It's a figure for the same sort of material as quoted by the mills under the conditions stated in the data sheet itself.

Q. What was your figure in your estimate corresponding to the 2.5?

A. 1.80.

Recross Examination

MR. HULL:

Q. Then this is not a unit cost for reinforcing bars comparable to what you have in your appraisal, but this is only one element entering into it?

A. One element, and it is headed at the top of the sheet Price Trends, and I want to make a clear statement, using as an example the reinforcing bars shown in the data under Complainant's Exhibit No. 11 for the year 1924, as high 2.40 a hundred and low 2.00 per hundred, average 2.22. In that year, some 600,000 pounds of reinforcing steel I purchased in connection with the construction of the reservoir mentioned before in this proceeding at Shamokin, the steel had no paint, and with the auxiliary spacers chairs and various things that go to make up the necessary adjustments, the reinforcing steel in cars was purchased f. o. b. cars in Shamokin at 2.30 per hundred pounds, or .023 a pound. It shows a relationship, and that dates and circumstances are things whereby the prices may be checked, and conclusions drawn for any particular date when you know the corresponding data.

Q. You stated you would not expect the financing of this bridge to be done in a period of depression, and that if you were making an appraisal as of the period of depression, you would take your data for the purpose of computing cost of financing at some other period before or after that, within the limit of two years?

A. Yes.

Q. Will you tell me within what time, or what time within two years of November, 1930, the bond market was any more favorable to the raising of money for an enterprise such as this, than it was at that time?

THE COMMISSIONER:

Do you know any time?

A. No, you don't expect two more years of such a depression, and it's merely theorizing on my part to mention it, perhaps, but my two years would be either two years back or two years forward, in order to get a period that would not be too long or too remote; but personally I would be surprised if we continue two more years of this depression that we have been experiencing for two years.

Q. How long has the bond market been depressed, do you know?

A. All markets have been depressed for a period since October, 1929.

Q. Was the bond market good in September, 1929?

A. The bond market was— I would not call it good, no, because it started to show the depression.

Q. Isn't it a fact prior to the break in the stock market in September and October, 1929, we experienced a period of approximately two years of specu-

lation in stocks, during which millions of millions of capital, which might otherwise have been invested in bonds, went for the purpose of speculating in stocks, and during that time bonds were at a low ebb, there was a depression in that period in the bond market?

A. That's true, bonds were affected first.

Q. Up to probably November, 1930, don't you know as a fact for the last three or four years we had a depressed bond market?

A. Yes. It's getting better, bonds are getting better first.

Q. Your expectation that you can finance this bridge within a period of two years from November, 1930, on conditions better than they were in 1930, is based upon your expectation that the bond market is going to improve in the next two years?

A. That's what I would expect.

Q. Don't you know that bankers, public utility managers, and financiers, were looking for improvement in the bond market since 1927, and have delayed the refinancing or refunding of old issues, and financing new work, awaiting a better bond market, and it has not come yet?

A. That's largely true.

Q. One word to clear up the situation with regard to this siding that would have to be constructed to reproduce this bridge, I think you stated this morning that a trestle to carry railroad cars would not be constructed all the way across the river. Nevertheless, there would be a trestle to carry the operating railway or tramway of the contractor the whole way across the bridge, would there not?

A. Yes.

Q. And such a trestle work was built by the Vang Construction Company?

A. Yes.

Q. Referring to the bridge on Highway route 39, what does this bridge cross?

A. I will have to get some more data. I didn't bring that data down that shows that.

MR. MATHER:

All testimony by the Commission in this last redirect examination as to any bridges except the Columbia-Wrightsville and Coplay-Northampton bridges, which have been covered in exhibits duly offered, is hereby withdrawn.

Q. Do you know the lineal foot length of the Coplay-Northampton bridge?

A. We will have to get the other data, if we want to go into that.

MR. HULL:

May I suggest he makes a note of it, and submits it at the same time he supplies the figures as to financing.

Q. I believe you said that crosses the Lehigh River?

A. That's shown on the notes in the corner of the exhibit, Lehigh Valley Railroad, Central Railroad of New Jersey, and the Lehigh River.

Q. Do you know the size of the Lehigh River at the place where this crosses it, how wide it is, and how the depth is?

A. The depth varies. It's not classed as a deep, wide river, not as wide as the Susquehanna.

Q. Do you know how wide it is?

A. I can't give you a close figure on it.

Q. Can you find out?

A. Yes.

Q. Will you find out?

A. Yes, you want the length of the bridge, and the width of the river.

Q. And give us the average depth at mean water?

A. Yes.

Q. Do you know the number of piers?

A. No.

Q. Will you make a note of it, and let us know how many piers there are?

A. Yes.

Q. And how many of them were built upon land, and how many of them were built in the water?

A. Yes.

Q. Do you know at what point sand and gravel were available for the construction of the Coplay-Northampton bridge?

A. No.

Q. You don't know what market they would go to, or what place they would have to go to get sand and gravel?

A. It would not be far, but I don't know which is the nearer place in that territory. Where it is not available they didn't use gravel.

Q. What did they use in making it?

A. Sand and stone.

Q. Where did they get their sand, do you know?

A. No, I don't know, but it would be available near that point.

Q. Are you assuming that, or do you know it

to be a fact?

A. I don't know, but I know the country.

Q. What county is it, between what counties?

THE COMMISSIONER:

Between Lehigh and Northampton Counties.

Q. Mr. Curry, I believe you stated that the basis of 4 per cent sinking fund method of arriving at accrued depreciation, was such that you believed such method to be applicable in the determination of the extent of accrued depreciation on this bridge structure, is that right?

A. Applicable when based on observation and knowledge of the bridge itself.

Q. Will you tell us what you observed in the bridge, which indicated to you that the 4 per cent sinking fund method was the method that ought to be used?

A. May I ask if you intend to have me determine why I used 45 years, or why I used the computation of the 4 per cent?

Q. I am not so much concerned about the life, because it seems to be the opinion of the engineers on both sides that 40 or 50 years is the probable life of this bridge. I am concerned more with the application of the 4 per cent sinking fund method. You say that you saw in the structure certain things which indicated to you that the 4 per cent sinking fund method was the method that ought to be used in estimating the accrued depreciation. I want to know what it was you saw that had any bearing or relation to the 4 per cent sinking fund method?

MR. MATHER:

First of all, did you say that?

A. I can't say that's the correct statement I

made. My basis for determination of accrued depreciation is based on observation and knowledge of the bridge. I believe that the accrued depreciation at this time, about this time, is approximately $40,000.

Q. Why do you say that you think it is that amount?

A. By the elements that are in that bridge, the characteristics in that bridge. It is a reinforced concrete bridge. There are some visible marks on the bridge that indicate that it is confirming what the experience of reinforced concrete bridges has been. I said at the hearing before this one, that that didn't mean that the bridge was ready to fall down, or anything unusual about the condition, but there are indications, and color marks from the materials in that bridge, the cement, and the iron oxide, and all the other elements that lead me to think that it will follow out the expectancy that I and engineers have noticed in like structures. Your own witness, Mr. Masters, clearly stated the elements in the bridge that led him to the conclusion that as time went on it would be just the same as most other bridges, and said that the materials in that were subject to deterioration and a behavior that is quite in accord with my opinion.

Q. In other words, you found that this bridge was depreciating as other bridges depreciate?

A. And if a prospective purchaser would look at this bridge, if he had my conclusions as to those elements, I feel sure that he would feel that it had depreciated $40,000.

Q. How did you arrive at $40,000 from having looked at the bridge?

A. Basically a round number determination of observed depreciation, according to my experience and knowledge and observation, after the application of such information properly to the 4 per cent sinking fund methods, and tables, produced a method whereby you can make a computation.

Q. It was not until after you applied the 4 per cent sinking fund method you got this figure of $41,000?

A. No, that particular figure of $41,000, which is the result of using factors to it, conforms to my judgment, otherwise I would not use it at all.

Q. You didn't make any estimate at all as to what it would cost to restore that bridge to 100 per cent condition, did you?

A. I didn't consider that was—

Q. You can answer that yes, or no.

A. No, because I didn't consider it necessary.

Q. What are the reasons why you think that the 4 per cent sinking fund method is applicable to this property, rather than this straight line method of computing depreciation?

A. Any method that would not conform to a value in an engineer's judgment could not conscientiously be used. It has been the experience for a long time of valuation engineers, I should say some valuation engineers, because there are advocates of other methods, that the 4 per cent sinking fund method, that that computation, when used on that basis, when property adapted, when the life expectancy is judged and determined after observation, and taking into account valuation engineers' past experience and observation, that that does seem in most cases to more nearly conform with such

judgment.

Q. You are advocating a 4 per cent sinking fund method and you can't conscientiously use another?

A. When properly used on the basic matters underlying it.

Q. What do you mean by that?

A. You can just take the 4 per cent sinking fund by rule of thumb, and use it.

Q. We have agreed that the probable useful life is 45 years. After you passed that, what is there you did other than use some rule of thumb in passing this point?

A. Nothing.

Q. Nothing at all?

A. There is no more to it

Q. The first step in the application of either the straight line or the 4 per cent sinking fund method is to determine the probable age?

A. Yes.

Q. After that you simply use a rule of thumb?

A. That's true, that's the way that figure is produced.

Q. After you determine the age, you as engineers are of the opinion that the 4 per cent sinking fund method ought to be used regardless of the nature of the utility or property in determining the extent of accrued depreciation, and determining annual depreciation, don't you?

A. No, when you go into a utility where the life is materially short, a very short life property, the difference is almost all or largely eliminated.

Q. Tell us in what kind of a utility you would advocate the straight line method?

A. An extreme case, bus line equipment.

Q. And why?

A. Short life. The difference between straight line and 4 per cent sinking fund was practically nothing.

Q. That's the only reason you would use the straight line, because there is not much difference between the two, and the straight line is simpler?

A. Simpler?

Q. To get clear on one other point in regard to this matter, it is the fact when you apply 4 per cent sinking fund method, the charge that you make for annual depreciation in the early years of the life of the property, is greater than those in later years, is it not, accrued to reserve?

A. Yes.

Q. The accruals to reserve are smaller at the start?

A. They constantly increase throughout the life of the property.

Q. So that the heaviest charges on earnings for this reserve come in the later years of the property?

A. Of course, part of that earnings, charges from the earnings, come from the fund itself.

Q. Well, the first payment in the reserve that you make the first year is theoretically put at compound interest of 4 per cent, isn't it?

A. Yes.

Q. Next year a larger—

A. An equal amount starting one year later.

Q. Equal to what?

A. First year, an amount equal to the amounts of the initial sum.

Q. In the second year, Mr. Curry, do you charge against earnings, and put into the reserve, an

amount which is the same as the amount you charged the first year?

A. Operating earnings you mean?

Q. Yes?

A. Yes, to make myself clear, there's also earnings from the interest on the reserve, and I want to differentiate from that.

Q. What is charged to the earnings, and sent into the reserve the first year, is such a sum as will, with compound interest at 4 per cent, equal one-forty-fifth of the total value of the property, if you are working on a 45 year life expectancy?

A. No.

Q. What is it?

A. The amount set aside from operating earnings each year during the life of a property, will each one of them accumulate to a different amount at the end of the 45th year, the one starting first being the larger one, naturally, owing to the compound interest method, and the number of years.

Q. The largest?

A. Will accumulate to the largest at the end of 45 years, and the amount set aside from operating earnings in the last year will not have had an opportunity to increase itself at all.

Q. And therefore the charge against the operations of that year will have to be greater, won't it?

A. No, because they are offset from the earnings of the other amounts set aside in different years.

Q. Do you know more than one method of applying the 4 per cent sinking fund method?

A. It would hardly be possible, it's just one method, the 4 per cent sinking fund method.

Lynn R. Curry—Redirect
Independent Estimate of Cost of Financing Clark's Ferry Bridge and Answers to Questions Concerning Coplay Northampton Bridge By Engineer Curry Admitted in Evidence

Redirect Examination

MR. MATHER:

Q. Could this bridge structure, without tearing all down and entirely rebuilding it over, be put back to the condition when it is 100 per cent as good as new?

A. No.

Q. Why not?

MR. MATHER:

I will withdraw the question.

THE COMMISSIONER:

Does that close the testimony in this case?

MR. MATHER:

I rest.

MR. HULL:

If the Commission please, we desire to offer, when we receive them from Mr. Curry, his estimate of the cost of financing, and answers to several questions concerning the Coplay-Northampton bridge, which he made note of this afternoon. I have a copy of an official report from Joseph K. Costello, General Manager of the Delaware River Bridge Joint Commission to that Commission, in which he has embodied the rates, which were in effect as of September 19th, 1930, on some 35 toll bridges throughout the country. I don't want to offer this whole report, but I propose to make up an excerpt from that report, and

I offer it now, in evidence here, as tending to show the value of the service rendered to the public.

MR. MATHER:

I have no objection.

THE COMMISSIONER:

That will be admitted.

MR. HULL:

During the intermission, I have examined the report made by the Chief of the Bureau of Engineering to the Secretary of the Commission, under date of February 15th, 1926, and accompanying that the detailed examination of Assistant Engineer Parmelee, to his Chief, Mr. Snow, of the Bureau of Engineering, and I offer both of these in evidence in this case. I think we have in this engineering report, we have the basis of all the findings of the Commission, as contained in that report, and in some points, as to depreciation, it is extremely instructive. The other memoranda we don't have anything to do with. These reports are offered for the purpose of showing the basis for the valuation found by the Commission in 1926, and contained in the report and order of the Commission offered in this case.

THE COMMISSIONER:

These reports are not expressions of opinion, either of the Chief of the Bureau of Engineering, or of his subordinates, based upon their own knowledge. They are merely an analysis of the testimony of other individuals, who took the stand, and whose testimony has already been offered in this record in

its original state. The record now contains original testimony. Furthermore, there is nothing to show that the Commission accepted Dr. Snow's report at its face value. I don't like to establish any practice of that kind. The report is simply for the guidance of the Commission. It is disallowed.

(Exception noted for respondent company.)

TESTIMONY CLOSED

IV.

EXHIBITS

COMPLAINANT'S EXHIBIT NO. 1

REPORT OF BUREAU OF ACCOUNTS AND STATISTICS OF THE PUBLIC SERVICE COMMISSION OF THE COMMONWEALTH OF PENNSYLVANIA ON ITS EXAMINATION OF THE BOOKS, ACCOUNTS AND RECORDS OF CLARKS FERRY BRIDGE COMPANY.

March 11, 1930.

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THE PUBLIC SERVICE COMMISSION OF THE COMMONWEALTH OF PENNSYLVANIA

BUREAU OF ACCOUNTS AND STATISTICS — B. FRANK MORRIAL, Chief of Bureau

Harrisburg, March 11, 1930.

To the Honorable,
The Public Service Commission of
the Commonwealth of Pennsylvania,
Harrisburg, Pa.

Gentlemen:

Pursuant to instructions your Bureau of Accounts and Statistics has examined the books, accounts and records of the Clarks Ferry Bridge Company and respectfully submits the following report:

I. CORPORATE HISTORY AND CAPITALIZATION.

The early corporate and financial history of the Clarks Ferry Bridge Company is set forth in detail by the Commission in its report and order dated June 8, 1926, at Complaint Docket No. 6611. Since that proceeding, however, the company, in 1929, refunded an issue of $450,000 of First Mortgage 6% Gold Bonds maturing June 1, 1939, at a price of 103½ and accrued interest.

(Page 2)

The purpose of refunding the First Mortgage 6% Gold Bonds maturing June 1, 1939, is indicated by the following excerpt quoted from affidavit of the treasurer of the company, attached to and made a part of Certificate of Notification, serial No. 5354, filed with the Commission on December 14, 1929, with respect to the issuance of the new bonds:

"The primary reason for refunding the 6% issue of bonds which matures on June 1, 1939,

is to relieve the Clarks Ferry Bridge Company from the duties imposed by Section 2 of Article VI of the first mortgage to The Pennsylvania Company for Insurances on Lives and Granting Annuities, which reads as follows:

"'The Bridge Company covenants with the Trustee and with the holders of any bonds issued thereby, that during the period that any of the said bonds are issued and outstanding in the hands of others than the Bridge Company and/or the Trustee, it will, on or before the first day of February in each and every year, pay to the Trustee as a part of the Repurchase Fund, seventy five per cent (75%) of the net annual earnings of the Bridge Company for the preceding calendar year remaining after the following sums have been deducted from such net annual earnings, to wit:

For dividends on common capital stock $18,000
For dividends on preferred capital stock
an amount not in excess of..... 12,250

"'It being understood and agreed that "net earnings" as used in this Section 2 of this Article VI, means the sum of money remaining after subtracting from the total gross revenues the general operating expenses of the Bridge Company, bond interest, the amounts paid in to the Repurchase Fund as set forth in Section I of this Article VI, the cost of maintenance of the Bridge Company's property and all taxes, including Federal Taxes.'

"A further reason for such refunding of said bonds, is to provide for the redemption and refunding, at some future date, of the company's

7% Cumulative Preferred Capital Stock, consisting of 1750 shares with a par value of $100 each, aggregating, at par, $175,000."

(Page 3)

II. Data Submitted by Respondent at Complaint No. 6611

The estimates of the respondent with respect to the reproduction cost of the new bridge and actual and estimated operating expenses which the Commission had before it in Complaint 6611, are set forth in Respondent's Exhibits Nos. 5 and 6 of that record, and for the purposes of comparison with the figures in the present proceeding, these exhibits have been reproduced on pages 11 and 12 of this report.

III. Balance Sheets

There is submitted as Exhibit I, comparative balance sheets of the company as disclosed by its books at the close of each year from 1924 to 1929, inclusive.

Each of the balance sheet items requiring further discussion is taken up in the succeeding paragraphs in the order shown on Exhibit I.

Property Account

This account has been used to reflect the book value of the old bridge. A detailed analysis of the account as recorded on the books of the company as of January 1, 1924, together with certain additions, retirements and amortizations up to and including the year 1929, is submitted as Exhibit II.

Item 3 of Exhibit II represents the transfer to the old bridge account of the following items which the company's accountants claimed were errone-

ously charged to operating expenses during the years 1915 to 1923, inclusive:

Item—	Amount
Material	$10,461.85
Labor	6,955.04
Construction Contract	7,600.00
Replacement of Pier	4,771.54
Incorporation Expense	819.35
Total	$30,607.78

(Page 4)

With the exception of the item of $819.35 for incorporation expense, all of the foregoing items were disallowed in the Commission's finding of fair value of June 8, 1926.

Item 5, amounting to $1,000, represents the price which the company received for the frame superstructure of the old bridge.

Item 6, which is detailed on Exhibit II, covers the company's estimated book value ($52,104.20) of the items of used and useful property which were transferred from the old bridge to the "New Bridge (Other Charges)" account (see Exhibit III, item 32). In its finding of fair value on June 8, 1926, the Commission allowed $49,100 for these items of property on the basis of their depreciated reproduction cost.

Item 9 shows the amounts which were credited to the old bridge account in 1926, being the amount accrued for depreciation to date.

Item 10 represents a credit to the old bridge account of $63,574.53 and a concurrent charge to "Capital Surplus," with the apparent intention of reduc-

ing the book value of the old bridge as of the close of 1926, to $199,869.03, which balance the company proposes to amortize through earned surplus over a ten-year period.

Steward House (Removal, etc.)

This account, amounting to $4,811.18, as of Dec. 31, 1926, represents the cost of land acquired, and labor and material used, in moving the Steward house from the east side to the west side of the highway. In 1927, the amount shown in this account was transferred to account "New Bridge (Other Charges)," (see items 4 and 9 of Exhibit III).

New Bridge (Other Charges) Account

This account was opened by the company in 1924, to reflect the cost of constructing the new bridge. A detailed analysis of the account from 1924 to 1929, inclusive, is submitted as Exhibit III. In presenting this exhibit, the Bureau has endeavored to reconcile the various items of cost and/or book value with the amounts allowed by the Commission for the fair value of comparable items in its decision of June 8, 1926.

(Page 5)

New House Account

This account, amounting to $6,861.03 as of December 31, 1929, represents the cost of the construction of a building in which the company maintains an office. Parts of the building are also occupied as dwellings for the superintendent of the bridge and the clerk who has charge of the office and is responsible for the monies collected by the toll keepers. The several elements entering into the cost of the construction of this house were as follows:

Item—	Amount
Land	$1,000.00
H. W. Holtzman, (contract price and extras)	5,421.75
Heater	185.00
Plumbing fixtures and labor	22.78
Lighting fixtures, etc.	30.75
Labor, lumber, cement, cinders, etc.	200.75
Total	$6,861.03

Discount on Bonds

This account, which showed a balance of $58,500 as of December 31, 1928, represents the discount on $450,000 par value of First Mortgage 15-Year 6% Bonds which the company sold, at 87, to bankers, who in turn disposed of them to the public at 94. In Complaint No. 6611, the company included the total amount of this discount ($58,500) in "Cost of Financing," but the Commission in its report and order in that proceeding allowed only $31,500, which represented the true brokerage involved in the transaction.

As heretofore stated, the issue of bonds on which this discount was incurred was refunded in 1929, and after charging $3,510 of the discount against the depreciation reserve (representing an accrual of 2% on $58,500 for 1926, 1927 and 1928), the balance of $54,990 was charged against the company's earned surplus account.

(Page 6)

Common Capital Stock
Preferred Capital Stock

As previously stated the capital structure of this

company is fully explained in the Commission's report and order dated June 8, 1926. The dividends paid on both classes of stock from 1924 to 1929, inclusive were as follows:

	Stock Outstanding		Dividends Common		Preferred	
Year	Common	Preferred	Amount	%	Amount	%
1924	$250,000	$156,300	$18,000	7.2	$ 2,366.00	1.5
1925	250,000	175,000	18,000	7.2	12,150.25	6.9
1926	250,000	175,000	9,000	3.6	12,250.00	7.0
1927	250,000	175,000	27,000	10.8	12,250.00	7.0
1928	250,000	175,000	26,000	10.4	12,250.00	7.0
1929	250,000	175,000	30,000	12.0	12,250.00	7.0

Bonds

Certificates of Notification (Nos. 5354 and 5355) filed with the Commission on December 14, 1929, discloses that the Company proposed a new issue of $450,000 of First Mortgage 6% Sinking Fund Gold Bonds, the proceeds from part of which were to be used in the retirement of a former issue of 6% bonds not already provided for through the Sinking Fund. The new bonds were to be pledged as collateral with the Commonwealth Trust Company of Harrisburg, and the funds borrowed thereon were used to retire old bonds at 103½ and accrued interest. From time to time, the new bonds thus pledged were to be released and sold at 102½ and accrued interest, and the proceeds used in liquidation of the company's obligation to the Comonwealth Trust Company. As of December 31, 1929, the total outstanding bonds of the new issue amounted to $269,500.

Rebate Slips Outstanding

As of December 31, 1926, the company charged

its revenues with $31,270.07 and set up a corresponding liability representing the redemption value of rebate slips issued from July 1, to December 31, 1926. While rebate slips with a redemption value of $1,551.04 were issued during January and February, 1927, no liability for these slips has been accrued on the company's books. Of the $31,270.07 of rebate slips issued by the company, only $8,510.00 were redeemed, leaving $22,760.07 outstanding as of December 31, 1929.

(Page 7)

Reserve for Depreciation

There is presented as Exhibit IV an analysis of the depreciation reserve account from January 1, 1924 to December 31, 1929. While the company's records did not show the basis used in computing depreciation for 1927, 1928 and 1929, it would appear that a rate of 2% was used for the year 1929 and applied to the book value as follows:

Item—	Amount	Total
New Bridge (Other Charges)	$939,082.24	
New House Account	6,861.03	$945,943.27
Less:		
Contractor's Losses upon which depreciation was charged to Capital Surplus	213,140.90	
Land and Real Estate	12,550.00	225,690.90
Basis used for Depreciation		$720,252.37
2% on above Base		$ 14,405.04

Capital Surplus

There is presented as Exhibit V an analysis of the debits and credits to this account from its inception in 1926 to 1929, inclusive.

Surplus-Profit and Loss Account

Exhibit VI is a detailed analysis of the company's Surplus-Profit and Loss Account as shown by its books from 1924 to 1929, inclusive. It is believed that the items shown on this exhibit are self-explanatory.

IV. Income Accounts

There is submitted as Exhibit VII a comparative income statement for the years 1924 to 1929, inclusive. The following comments and additional exhibits are submitted with respect to the several items shown on this exhibit.

Revenues

Exhibit VIII is a comparative monthly statement of toll revenues collected by the company from January 1, 1924 to February 28, 1930.

(Page 8)

A further detailed analysis of toll revenues was made for the period from January 1, 1927 to February 28, 1930, and the following exhibits are submitted showing the tariff classification, volume of traffic and resultant revenue:

Period	Effective Tariff	Exhibit No.
First 6 Mos. of 1927	Jan. and Feb. Tariff No. 2; Mar., Apr., May and June Tariff No. 3	IX
Last 6 Mos. of 1927	Tariff No. 3	X

First 6 Mos. of 1928—Tariff No. 3	XI
Last 6 Mos. of 1928—Tariff No. 3	XII
First 6 Mos. of 1929—Tariff No. 3	XIII
Last 6 Mos. of 1929—Tariff No. 4	XIV
Jan. and Feb. 1930—Tariff No. 4	XV

Operating Expenses.

Officers' Salaries:

There is presented as Exhibit XVI an analysis of this account from 1924 to 1929, inclusive.

The lower section of this exhibit also shows the amounts of cash dividends paid to the officers of the company during the same period.

In the Commission's findings of June 8, 1926, (C. 6611) the sum of $2,400 was allowed for the item of officers' salaries.

Labor:

An analysis of this account for the years 1928 and 1929 developed the following details:

Explanation	1928	1929
Superintendent	$ 900.00	$1,188.00
Clerk	900.00	900.00
Toll keepers	6,121.00	6,257.03
Clearing snow	130.05	166.20
Papering	11.18	22.08
Miscellaneous	47.40	98.52
Totals	$8,109.63	$8,631.83

(Page 9)

As of December 31, 1929, the monthly salaries of the above employees were as follows:

Position	Salary Per Month
1 Superintendent	$75.00
1 Clerk	75.00
5 Toll Keepers	100.00
1 Toll Keeper	83.34

In its report and order dated June 8, 1926, the Commission made an allowance of $8,000 for salaries of toll keepers and general labor, and $500 for the item of "Clearing Snow."

General Charges:

The charges to this account for the period from 1924 to 1929, inclusive, were analyzed, and there is submitted as Exhibit XVII a more detailed classification of this account, together with a comparison of the allowances made for comparable items in the Commission's decision of June 8, 1926. In the footnotes appended to this statement certain comments are made with respect to the inclusion of several items as operating expenses.

Insurance:

An analysis of this account for the years 1926 to 1929, inclusive, discloses that the company paid the following amounts for insurance:

Kind of Insurance	1926	1927
Flood, Lightning, Use and Occupancy	$2,000.00	$2,000.00
General liability	165.00	165.00
Workmen's compensation (net)	43.34	49.79
Burglary	20.00	20.00
Dwelling		3.15
Bond re redemption of rebate		

slips		500.00
Miscellaneous		
Totals	$2,228.34	$2,737.94
Kind of Insurance	1928	1929
Flood, Lightning, Use and Occupancy	$1,741.10	$1,500.00
General liability	165.00	165.00
Workmen's compensation (net)	20.43	9.65
Burglary	20.00	20.00
Dwelling	28.00	3.15
Bond re redemption of rebate slips	342.47	
Miscellaneous	1.95	11.58
Totals	$2,318.95	$1,690.08

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The Commission made an allowance of $2,500 for insurance in its report and order dated June 8, 1926.

Taxes:

There is submitted as Exhibit XVIII a detailed analysis of the taxes paid and/or accrued during the years 1924 to 1929, inclusive; also the years to which these taxes were applicable.

The decrease in the amount accrued for Federal income taxes for 1929 as compared with 1928, was due in a large part to the company's having claimed as a deduction, the amount of bond discount written off to surplus in 1929, and in part due to a reduction in the tax rate applicable to corporations.

The Commission in its report and order dated June 8, 1926, made an allowance of $3,500 for Federal income tax, $2,000 for state capital stock tax

and $50 for local county taxes, or a total allowance of $5,550.

Respectfully submitted,

J. E. KEANE, *Accountant.*
B. F. MORGAL, *Chief.*

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RESPONDENT'S EXHIBIT NO. 5 (COMPLAINT NO. 6611)

REPRODUCTION COST NEW OF PRESENT CLARKS FERRY BRIDGE STRUCTURE

Cost of Bridge	$ 754,751.07
Value of old Bridge—depreciated—transferred to new Bridge	52,101.20
Loss of contractor upon labor and materials only	61,140.90
Overhead, depreciation and plant charge	82,000.00
Fair profit to contractor	70,000.00
Reproduction cost new	$1,019,993.17
Allowance for working capital	2,733.33
Value of location	100,000.00
	$1,122,726.50

RESPONDENT'S EXHIBIT NO. 6 (COMPLAINT NO. 6611)

ESTIMATE OF COST AND VALUATION
NEW CLARKS FERRY BRIDGE
SEPTEMBER 30, 1925

Cost of Construction:	
New Concrete Bridge and Approaches	
Paid Vang Construction Co.	$566,301.29
Toll Houses:	
Paid J. Frank Saussaman	3,000.00
Amount due Frank Saussaman (Estimated)	859.27
New Superintendent's House	5,673.93
Moving Houses North Approach	3,470.82
Electric Signs	545.40
Electric Conduits	336.10
Electric Manholes	75.64
Electric Lights on Signs	1,417.25
Electric Bulbs	90.99
Electric Reflector Hoods	500.00
Electric Reflectors and Flashing Switch	315.50

Complainant's Exhibit No. 1 439a

Electric Lanterns, W. E. Co. (Estimated)		6,479.54
Electric Power Connection		88.06
Electric Light Standard Wiring		1,070.00
Electric Lamp Standard Changes and Incidentals		79.97
Electric Painting		192.00
Bronze Tablets		1,275.00
Curb Angles		210.75
Cinder Fill at Supt. House		141.90
Total New Construction		$592,123.41
Engineering, etc.:		
Design & Supervision—Amount Paid	$ 33,560.45	
Inspection of Materials—Amount Paid	3,611.52	
Surveys—Amount Paid	10.00	
Analyses—Amount Paid	90.00	
Design & Supervision—Amount due (Est.)	2,000.00	39.271.97
Miscellaneous Charges:		
Land Purchased—Approaches	2,550.00	
Insurance	480.00	
Pipe, Hose, etc.	1,240.72	4.270.72

Cost of Financing:		
Discount on Sale of Bonds	58,500.00	
Discount and Commission on Sale of Preferred Stock	10,843.00	
Professional Services	2,994.20	
Expenses of Bond Issue	2,185.66	74,522.86
Interest Paid During Construction		20,912.11
Cost of Removing Old Bridge (Estimated):		
Removing 9 Piers—7650 cu. yds. @ 3.00	22,950.00	
Credit—Sale of Old Bridge	1,000.00	21,950.00
Cost of Finishing, Planting, Gardening, etc.		1,700.00
Valuation Appraisal of Old Bridge Reproduction Cost New Basis—Depreciated Value Remaining Transferred to New Bridge:		
2 Abutments	14,119.20	
Retaining Walls	7,464.00	
Approach Fills	12,000.00	

Contingencies	3,148.75	
Engineering	3,967.43	
Financing	1,401.82	
Land and Real Estate Value	10,000.00	52,101.20
Value to be Amortized:		
Wooden Bridge Structure	92,561.04	
9 Masonry Piers	82,620.00	
Toll House	2,000.00	
Approach Paving and Railing	1,000.00	
Contingencies	12,875.45	
Engineering	16,223.06	
Financing	5,732.15	
	$213,011.70	
Allowance for Working Capital		2,733.33
Value of Location		100,000.00
Total Value of Existing Structure		$909,585.60*

*This amount does not include the contractor's loss nor the contractor's fair profit.

Estimated Statement of Net Earnings
On Basis of One Year:

Estimated Revenue (1925)		$115,000.00
Operating Costs 1925 Estimated	$ 32,800.03	
Depreciation 2%	15,880.04	
Amortization of Old Bridge (10 Years)	28,941.48	77,621.55
Net Earnings Estimated		$ 37,378.45

Represents 4.1 Return on Valuation of $909,585.60.

DETAILED ANALYSIS OF OPERATING EXPENSE
1924 and 1925

	Year 1924	7 Mos. 1925	Estimated Year 1925
Salaries—Officers	$ 4,800.00	$ 2,800.00	$ 4,800.00
Salaries—Toll Keepers, etc.	2,400.00	2,100.00	
General Labor	5,012.78	2,357.50	8,000.00
Insurance	4,946.42	2,062.97	2,500.00
Federal Income Tax	3,647.20	3,209.63	6,419.26
Federal Capital Stock Tax	317.00	414.00	414.00
State Capital Stock Tax	240.00		2,500.00

State Loans Tax	200.00		1,800.00
State Emergency Profits		151.77	151.77
Bond Tax of 2%	45.00	17.40	540.00
Local County Taxes	20.83		50.00
Telephone	92.32	43.76	100.00
Light	60.77	215.22	2,000.00
Coal	58.50	127.10	250.00
Legal Services	135.00	32.90	150.00
Postage and Printing	191.64	321.04	500.00
Hose, Pipe, Supplies, etc.	172.28	42.44	100.00
Miscellaneous	92.10	25.36	100.00
Donations		125.00	125.00
Cleaning Snow			500.00
Maintenance			1,800.00
	$22,431.84	$14,046.09	$32,800.03

EXHIBIT 1.

COMPARATIVE BALANCE SHEETS AS SHOWN BY THE COMPANY'S BOOKS AT CLOSE OF EACH CALENDAR YEAR FROM 1924 to 1929, INCLUSIVE

Account Title	1924	1925	1926	1927	1928	1929
ASSETS						
Property Account	$ 305,015.31	$ 303,869.81	$ 184,705.39	$ 168,631.93	$ 151,594.03	$ 133,533.92
New Bridge (Vang Construction Co.)	333,781.05	559,340.75	559,340.75			
Stewart House (Removal, Etc.)		4,811.18	4,811.18			
New Bridge (Other Charges)	35,880.41	81,209.93	373,067.89	939,082.24	939,082.24	939,082.24
New House Account	1,500.00	6,673.93	6,861.03	6,861.03	6,861.03	6,861.03
Sinking Fund		20,000.00	41,766.66	65,389.26	114,752.56	1,250.00
Cash	187,670.96	423.68	4,653.73	1,268.82	3,318.09	4,996.78
Pennsylvania Company			69.99			
Discount on Bonds	56,550.00	52,650.00	58,500.00	58,500.00	58,500.00	
Bond Expense (New Issue)						6,297.70
Totals	$ 920,397.73	$1,028,979.28	$1,233,776.62	$1,239,733.28	$1,274,107.98	$1,092,021.67
LIABILITIES						
Common Capital Stock	$ 250,000.00	$ 250,000.00	$ 250,000.00	$ 250,000.00	$ 250,000.00	$ 250,000.00
Preferred Capital Stock	156,300.00	175,000.00	175,000.00	175,000.00	175,000.00	175,000.00
Bonds	450,000.00	450,000.00	450,000.00	450,000.00	450,000.00	269,500.00
Notes Payable	14,000.00	70,000.00	30,000.00	35,000.00	45,000.00	80,000.00
Rebate Slips Outstanding			31,270.07	23,170.07	22,870.07	22,760.07
Reserve for Depreciation	18,278.18	18,278.18	34,843.42	54,662.65	78,763.35	93,921.21
Reserve for Federal Tax					8,700.36	2,087.60
Capital Surplus			149,566.37	149,566.37	136,777.91	132,515.09
Surplus, P. & L. Account	31,819.55	65,701.10	113,096.76	102,334.18	106,996.29	66,237.70
Totals	$ 920,397.73	$1,028,979.28	$1,233,776.62	$1,239,733.28	$1,274,107.98	$1,092,021.67

Complainant's Exhibit No. 1

EXHIBIT II.

ANALYSIS OF "PROPERTY" ACCOUNT (OLD BRIDGE) AS SHOWN BY THE BOOKS FROM 1924 to 1929, INCLUSIVE.

(Italics Indicate Red Figures)

Item	Explanation	Amount	Balance Jan. 1, 1924	1925	1926	1927	1928	1929
	1915. Cash	$ 3,000.00	$	$	$	$	$	$
	1915. First Mortgage Bonds	20,000.00						
	1915. Common Stock	22,000.00						
	1917. Payment on contract, new spans, etc.	10,000.00						
	1918. Payment on contract	20,000.00						
	1920. Replacement of piers	5,015.31						
	1923. Appreciation on basis of appraised value	225,000.00						
1	Balance January 1, 1924, per books (see page 4, Report and Order of Commission at C. D. No. 6611)		305,015.31					
2	New safe (see item 8 below)			100.00				
3	To restore to old bridge account the value of capital items charged as expense during years 1915-1923, inclusive			30,607.78(a)				
4	Sale of old house, lumber, etc. (see item 7 below)			*245.50*				
5	Sale of old bridge			*1,000.00*				
6	To transfer the values of the following used and useful property to new structure (see pages 8 and 11 of Commission's decision of June 8, 1926):							
	Two abutments	*14,119.20*						
	Retaining Walls	*7,464.00*						
	Approach Fills	*12,000.00*						
	Contingencies	*3,148.75*						
	Engineering	*3,967.43*						
	Financing	*1,401.82*						
	Land and Real Estate Value	*10,000.00*		*52,101.20*(a)				
7	Materials sold and credited to property (item 4 above) which should have been credited to income				245.50			
8	To transfer cost of new safe to account "New Bridge-Other Charges." (See item 2 above)				*100.00*			
9	To close depreciation reserve account:							
	Amount reserved prior to December 31, 1924				*18,278.18*			
	Amount reserved in 1925				*800.15*			
10	Amount charged against "Capital Surplus" to reduce book value of old bridge to $199,869.03, which balance the company is amortizing through earned surplus over a 10-year period				*63,574.53*			
	Sub Totals		305,015.31	*22,638.92*	*82,507.36*			
	Accumulated Sub Totals			282,376.39	199,869.03			
11	Amortization charged to surplus				*27,155.78*	*27,155.78*	*27,155.78*	*27,155.78*
12	Interest allowance on amortization credited to surplus				11,992.14	11,082.32	10,117.91	9,095.64
	Grand Totals				*15,163.64*	*16,073.46*	*17,037.87*	*18,060.14*
	Balance at Close of Year		$305,015.31	$282,376.39	$184,705.39	$168,631.93	$151,594.06	$133,533.92

(a) Represent adjusting entries applicable to 1925 but placed upon books after closing December 31, 1925.
To reconcile above balance at December 31, 1925 ($282,376.39) with amount shown on balance sheet, these two items should be added to the balance sheet figure (Exhibit I).

EXHIBIT III.

ANALYSIS OF NET ADDITIONS TO ACCOUNT "NEW BRIDGE (OTHER CHARGES)" AS SHOWN BY THE BOOKS FROM 1924 TO 1929, INCLUSIVE

(Italics Indicate Red Figures)

Item	Explanation	1924	Jan. 1 to Sept. 30, 1925	Oct. 1 to Dec. 31, 1925	1926	1927	1928 1929	Total Book Value Dec. 31, 1929	Fair Value Allowed by Commission's Order of June 8, 1926	Excess of Book Value Over Fair Value
	Cost of Bridge:									
1	New Bridge Account—Amount Paid Vang Construction Company on Contract	$	$	$	$	$559,340.75		$566,301.19	$	$
2	Vang Construction Company (Extras): Sign, Monument and Concrete Work		6,960.44							
3	Toll House		3,000.00	1,061.85				4,061.85	586,437.00(a)	555.51
4	Moving Steward House (North Approach)					3,811.18(b)		3,811.18		
5	Electric Wiring and Fixtures		6,248.04	3,098.76	824.79			12,600.49		
6	Markers, Name Plates, Tablets, Signs, Etc.		2,398.90	20.00		10.00				
7	Curb Angles		217.80					217.80		
8	Engineering	18,165.23	19,660.88	500.00	987.10			39,313.21	39,272.00	41.21
	Miscellaneous Charges:									
9	Land Purchased for the Steward House					1,000.00(b)		1,000.00		
10	Land Purchased from P. R. R. for Approach	350.00						350.00		
11	Payment for Use of Land During Construction (Bestecki)	200.00						200.00	3,271.00(c)	.38
12	Fire Hose, Pipe, Fittings, Etc.	1,240.72						1,240.72		
13	Fire Insurance During Construction		480.00					480.00		
	Cost of Financing:									
14	Legal Services in re Stock and Bond Issue	2,700.00						2,700.00		
15	Accounting Services	112.62		230.25	230.25			112.62		
16	Filing and Other Fees in re Increase in Indebtedness	114.08						114.08	2,994.00(d)	.20
17	Stock Certificates	67.50						67.50		
18	Commission and Expenses on Preferred Stock	813.00	30.00					843.00	843.00(d)	
19	Recording Deed	50.00						50.00		
20	Printing Mortgage	257.50						257.50		
21	Printing Bonds, Etc.	450.00						450.00		
22	Services in re Payment of Coupons	33.75	33.75					67.50		
23	Expenses in re Signing Bonds	37.88						37.88	2,186.00(d)	.31
24	Services, Certifying Bonds, Accepting Trust, Etc.	450.00					No Additions	450.00		
25	Legal Services for Trustee	100.00					During These	100.00		
26	Stamps	312.50					Two Years	312.50		
27	Advertising	40.70						40.70		
28	Traveling Expenses	120.93						120.93		
29	Miscellaneous	115.00	183.65					298.65		
30	Interest During Construction				20,878.36			20,878.36	20,912.00	.33
31	Finishing, Planting, Gardening, Etc.			420.75	151.10	67.00		638.85	1,700.00	1,061.15
32	Used and Useful Property Transferred from Old Bridge (For Detail, see Exhibit II)				52,101.20			52,101.20	49,100.00	3,001.20
33	Removal of Piers				3,009.09	1,777.02		4,786.11	21,950.00	17,163.89
34	Discount on Exchange of Preferred Stock	10,000.00						10,000.00	Disallowed	
	Contractors' Losses:									
35	Labor and Material				61,140.90			61,140.90	Disallowed	
36	Overhead Depreciation and Plant Charges				82,000.00			82,000.00	Disallowed	
37	Fair Profit to Contractor				70,000.00			70,000.00	Disallowed	
	Other Items:									
38	Snow Plow			306.66				306.66		
39	Material Receipt Forms	59.00						59.00		
40	Drilling	90.00						90.00		
41	Moving Building		60.00					60.00		
42	Lumber, Cement, Sand and Cinders		44.85		13.55	3.20		61.60		
43	New Safe				100.00			100.00		
44	Lockers, Linoleum and Stove			149.95				149.95		
45	Sale of Old Pipe				337.28			337.28		
46	Taxes During Construction				158.40			158.40		
47	Engineering Transferred from Surplus				1,000.00			1,000.00		
48	Miscellaneous		145.06	77.93	61.06	5.20		289.19		
	Totals	$ 35,880.41	$ 39,463.37	$ 5,866.15	$291,857.96	$566,014.35			$728,665.00	
	Balance at Close of Period	$ 35,880.41	$ 75,343.78	$ 81,209.93	$373,067.89	$939,082.24	$939,082.24	$939,082.24		

(a) The Commission's order allowed $592,253 for "Cost of Construction" which embraced Items 1 to 7, inclusive, aggregating $586,437 together with an item of $5,816 [illegible]

44	Lockers, Linoleum and Stove			149.95				149.95	
45	Sale of Old Pipe				337.28			337.28	
46	Taxes During Construction				158.40			158.40	
47	Engineering Transferred from Surplus				1,000.00			1,000.00	
48	Miscellaneous		145.06	77.93	61.06	5.20		289.19	
	Totals	$ 35,880.41	$ 39,463.37	$ 5,866.15	$291,857.96	$566,014.35			$728,665.00
	Balance at Close of Period	$ 35,880.41	$ 75,343 78	$ 81,209.93	$373,067.89	$939,082.24	$939,082.24	$939.082.24	

(a) The Commission's order allowed $592,253 for "Cost of Construction" which embraced Items 1 to 7, inclusive, aggregating $586,437 together with an item of $5,816 identified in the appraisal estimate as "Superintendent's Houses" but which is carried on the company's books in a separate account entitled "New House Account" with a balance as of December 31, 1929, of $6,861.03 (see text).

(b) These two items aggregating $4,811.18 were carried in a separate account entitled "Steward House (Removal, Etc.)" until 1927, when they were transferred to the "New Bridge (Other Charges)" account.

(c) The Commission's order allowed $4,271 for "Miscellaneous Charges," the difference of $1,000 being included in a separate account entitled "New House Account" (see text).

(d) These three items aggregating $6,023, together with 31,500 for brokerage, or $37,523, were allowed by the Commission as "Cost of Financing." The $31,500 was charged by the company to "Discount on Bonds" account, which account has since been written off to Surplus.

(e) The fair value of $728,665 accounted for in this statement may be reconciled with the total fair value in the Commission's decision of June 8, 1926, as follows:

Amount Allowed by Commission for Fair Value of:	
Items Charged to New Bridge Account	$728,665
Superintendent's Houses (see (a) above)	5,815
Land Charged to "New House" account (see (c) above)	1,000
Brokerage (see (d) above)	31,500
Incorporation Expense Charged to "Property Account (Old Bridge)"	819
Total Fair Value as Found by the Commission	$767,800

EXHIBIT IV.

ANALYSIS OF ACCOUNT "RESERVE FOR DEPRECIATION" AS SHOWN BY THE BOOKS FROM 1924 TO 1929, INCLUSIVE

Explanation	Amount	1924	1925	1926	1927	1928	1929
Balance Beginning of Year	$	$ 8,001.54	$ 18,278.18	$ 18,278.18	$ 34,843.42	$ 54,662.66	$ 78,763.35
Credits during year							
Reserve—3% on old Bridge		9,150.46					
Reserve—2% on new Bridge		1,126.18					
Depreciation for 1925							
Old Bridge	800.15						
New Bridge	11,655.87			20,152.86			(c)
Appreciated Value	7,696.84						
Depreciation at rate of 2% on new Bridge				15,490.71			
Depreciation (rate not stated)					19,819.24	15,575.05	14,405.04
Depreciation of 2% on contractor's losses of $213,140.90, (Capital Surplus charged with amount of depreciation)						8,525.64 (b)	4,262.82
		18,278.18	18,278.18	53,921.75	54,662.66	78,763.35	97,431.21
Debits During Year							
To close depreciation reserve—old Bridge—12-31-24				18,278.18			
To close out the depreciation charge on old Bridge for 1925				800.15			
To credit bond discount account with 2% taken as depreciation on $58,500 for the years 1926, 1927 and 1928							3,510.00
Balance End of Year		18,278.18	18,278.18	34,843.42	54,662.66	78,763.35	93,921.21
		$ 18,278.18	$ 18,278.18	$ 53,921.75	$ 54,662.66	$ 78,763.35	$ 97,431.21

(a) In respondent's brief at C. D. No. 6611, P. 41, this amount is calculated as follows:

Total value of existing structure (Ex. No. 6)		$ 909,585.60
Excess of fair present value over cost		213,140.90
Total Value		$1,122,726.50
Less:		
Value of location	$100,000.00	
Working capital	2,733.33	
Real estate owned prior to 1924	10,000.00	
Real estate acquired in 1924	2,350.00	115,083.33
Base for computing depreciation		1,007,643.17
Depreciation at 2%		$ 20,152.86

(b) For two years.

EXHIBIT V.

ANALYSIS OF ACCOUNT "CAPITAL SURPLUS" AS SHOWN BY THE BOOKS OF THE COMPANY FROM 1926 TO 1929, INCLUSIVE

		1926	1927	1928	1929
Balance Beginning of Year	$	$	$149,566.37	$149,566.37	$136,777.91
Additions During Year:					
To capitalize the following items (See Exhibit III):					
Loss of contractor upon labor and material only	61,140.90				
Overhead, depreciation and plant charges	82,000.00				
Fair profit to contractor	70,000.00	213,140.90			
Deductions During Year:					
To reduce value of old bridge to $199,869.03 (See Exhibit II)		63,574.53			
Depreciation at rate of 2% on $213,140.90				12,788.46(a)	$ 4,262.82
Balance End of Year		$149,566.37	$149,566.37	$136,777.91	$132,515.09

(a) Includes depreciation for year 1926 and 1927.

Complainant's Exhibit No. 1

EXHIBIT VI.

ANALYSIS OF ACCOUNT "SURPLUS—PROFIT AND LOSS ACCOUNT" FROM 1924 TO 1929, INCLUSIVE

Classification of Items	1924	1925	1926	1927	1928	1929
Balance Beginning of Year	$ 4,478.75	$ 31,819.55	$109,047.25	$113,096.76	$102,334.18	$106,996.29
Additions During Year:						
From Income	49,656.80	67,931.80	25,299.51	44,560.88	64,387.52	82,304.05
Engineering During Construction (Capitalized)		1,000.00				
Interest During Construction (Capitalized)		20,878.36				
Taxes During Construction (Capitalized)		158.40				
To Restore to Capital Accounts, Bond Discount Charged off (1924)		1,950.00				
To Restore Bond Discount Charged off in the Year 1925		3,900.00				
To close Depreciation Reserve—Old Bridge—Dec. 31, 1924		18,278.18				
To Restore to Old Bridge Account Capital Items Charged as Expense During Years 1915-1923, Inclusive		30,607.78				
To Reflect the Interest on the Investment in the Old Bridge		11,992.14		11,082.32	10,117.91	9,095.64
Materials Sold not Included in Income of the Years 1925 or 1926		245.50				
To Transfer Surplus Reduction Arising from Depreciation on $213,140.90 from Earned Surplus to Capital Surplus					4,262.82	
Totals	54,135.55	188,761.71	134,346.76	168,739.96	181,102.43	198,395.98
Deductions During Year:						
Dividends:						
Common Stock	18,000.00	18,000.00	9,000.00	27,000.00	26,000.00	30,000.00
Preferred Stock	2,366.00	12,150.25	12,250.00	12,250.00	12,250.00	12,250.00
To Charge off Amortization on Old Bridge		27,155.78		27,155.78	27,155.78	27,155.78
To Charge off Fee for Accounting Service Which Was Capitalized in Error		230.25				
To Correct Entry as of December 31, 1925, Closing out Reserve for Depreciation Account		18,278.18				
To Create a Reserve for Federal Income Tax of 1928					8,700.36	
Bond Discount Written off	1,950.00	3,900.00				54,990 00
Premium Account (Net)						7,762 50
Balance End of Year	31,819.55	109,047.25(a)	113,096.76	102,334.18	106,996.29	66,237 70
Totals	$ 54,135.55	$188,761.71	$134,346.76	$168,739.96	$181,102.43	$198,395.98

(a) The difference of $43,346.15 between this amount ($109,047.25), and the balance shown on balance sheet Exhibit No. I, (65,701.10), represents adjusting entries applicable to 1925 but placed upon the books after closing.

EXHIBIT VII.

COMPARATIVE INCOME STATEMENT AS SHOWN BY THE COMPANY'S BOOKS FOR THE YEARS 1924 TO 1929, INCLUSIVE

Account	1924	1925	1926	1927	1928	1929
Operating Revenue						
Bridge Tolls	$ 90,203.50	$124,021.05	$118,718.71	$122,805.95	$135,499.76	$141,538.93
Rents	36.50	150.00	350.00	300.00	300.00	300.00
Materials Sold	655.10	51.86				
Total Operating Revenue	90,895.10	124,222.91	119,068.71	123,105.95	135,799.76	141,838.93
Operating Expenses						
Officers' Salaries	4,800.00	4,800.00	4,800.00	6,000.00	6,000.00	6,000.00
Labor	7,412.78	7,532.55	7,968.10	8,150.25	8,109.63	8,631.83
General Charges	802.61	3,663.77	6,191.50	6,267.15	2,700.97	2,845.14
Insurance	4,946.42	1,629.34	2,228.34	2,737.94	2,318.95	1,690.08
Taxes	4,470.03	9,785.11	5,916.26	10,375.86	11,437.35	2,384.78
Depreciation	10,276.64		35,643.57	19,819.24	15,575.05	14,405.04
Total Operating Expenses	32,708.48	27,410.77	62,747.77	53,350.44	46,141.95	35,956.87
Operating Income	58,186.62	96,812.14	56,320.94	69,755.51	89,657.81	105,882.06
Income Deductions						
Interest	8,529.82	28,880.34	31,021.43	25,194.63	25,270.29	23,578.01
Net Income	$ 49,656.80	$ 67,931.80	$ 25,299.51	$ 44,560.88	$ 64,387.52	$ 82,304.05

EXHIBIT VIII.

COMPARATIVE MONTHLY STATEMENT OF REVENUES FROM 1924 TO FEBRUARY 28, 1930.

(Italics Indicate Red Figures)

Month	1924	1925	1926	1927	1928	1929	1930
January	$ 2,612.93	$ 2,325.35	$ 4,854.93	$ 5,495.97	$ 6,082.07	$ 7,133.45	$ 5,496.00
February	1,948.37	2,879.10	3,271.06	5,468.60	5,803.85	6,998.83	5,740.65
March	3,337.15	5,513.00	6,554.73	6,696.26 (b)	7,367.26	11,125.52	
April	5,042.75	7,793.61	9,482.97	8,545.82	9,822.22	12,730.24	
May	7,115.35	11,004.84 (a)	14,024.99	11,374.36	11,801.34	15,835.37	
June	9,334.28	12,988.19	14,917.86	11,753.82	13,626.08	18,653.70	
July	11,994.98	16,445.49	20,730.88 (b)	15,753.50	15,947.15	14,409.51 (c)	
August	14,477.82	19,823.20	22,910.48	15,814.87	14,843.50	15,750.46	
September	10,911.91	16,329.92	19,473.59	13,804.04	14,631.50	12,824.65	
October	10,068.77	11,400.18	14,149.37	11,212.31	13,477.53	10,510.05	
November	8,467.84	10,284.72	11,978.54	9,774.50	11,444.74	8,442.75	
December	4,891.35	7,232.45	7,639.38	7,111.90	10,652.52	7,124.40	
Less rebate slips issued			31,270.07 (b)				
Totals	$ 90,203.50	$124,021.05	$118,718.71	$122,805.95	$135,499.76	$141,538.93	

(a) Tariff P. S. C. Pa. No. 2 became effective May 30, 1925.

(b) On June 8, 1926, (C. 6611) the Commission ordered the Company to cease and desist from collecting the rates contained in Tariff No. 2 and was directed to file a new tariff reducing the rates effective July 1, 1926. The Commission's decision was appealed to the Superior Court and the old tariff, (P. S. C. Pa. No. 2) was continued in effect until March 1, 1927, when the appeal was withdrawn. In the meantime, (July 1, 1926 to March 1, 1927) rebate slips were issued, but the rates contained in the new tariff, (P. S. C. Pa. No. 3) were not charged until March 1, 1927. While rebate slips amounting to $1,551.04 were issued during January and February 1927, its liability was not recorded on the company's books.

(c) Tariff P. S. C. Pa. No. 4 became effective July 1, 1929.

Complainant's Exhi

EXHIBIT IX.

DETAILED OPERATING REVENUE COLLECTED FOR THE

(Italics Indicate Red

Revenue Collected Under Tariff P. S. C. Pa. No. 2

(Rebate Slips Being Issued)

Tariff Classification	Tariff Charge	January Tariff Unit	January Revenue	February Tariff Unit	February Revenue	Total Jan. 1 to Feb. 28, 1927 Tariff Unit	Total Jan. 1 to Feb. 28, 1927 Revenue	Tariff Charge
Each automobile not exceeding 7 passenger seating capacity	$ .25	14,389	$ 3,597.25	14,063	$ 3,515.75	28,452	$ 7,113.00	$ .15
Each auto - runabout, 2 passenger seating capacity	.15	5,923	888.45	5,927	889.05	11,850	1,777.50	
Each automobile trailer, ½ price	.13	2	.26			2	.26	.08
Each R & S truck, 7 persons limit	.25	1,043	260.75	1,064	266.00	2,107	526.75	.25
Each R & S trailer, ½ price	.13			3	.39	3	.39	.13
Each T & U truck, 7 persons limit	.50	436	218.00	500	250.00	936	468.00	.40
Each T & U trailer, ½ price								.20
Each V & W truck, 7 persons limit	.75	299	224.25	295	221.25	594	445.50	.60
Each V & W trailer, ½ price								.30
Each Y & Z truck, 7 persons limit	1.00	137	137.00	139	139.00	276	276.00	.75
Each Y & Z trailer, ½ price	.50	2	1.00			2	1.00	.38
Each motor bus under 3,000 lbs.								.25
Each motor bus 3,000 to 4,999 lbs.								.40
Each motor bus 5,000 to 7,499 lbs.								.60
Each person, trucks & buses, in excess of 7	.03	337	10.11	13	.39	350	10.50	.02
Each wagon and one horse	.20	7	1.40	1	.20	8	1.60	
Each wagon and two horses	.30	6	1.80			6	1.80	.15
Each cart, with one horse	.15	1	.15			1	.15	
Each horse or mule, and rider	.12	4	.48	3	.36	7	.84	.07
Each horse or mule, without rider	.10	7	.70			7	.70	.05
Each foot passenger	.03	169	5.07	305	9.15	474	14.22	.02
Each head of horned cattle								.03
Each motorcycle or bicycle	.05	5	.25	10	.50	15	.75	.05
Each motorcycle with side car	.10	17	1.70	24	2.40	41	4.10	.10
Each traction engine								3.00
Each steam or gasoline engine well drill								2.50
Monthly Rates:								
Family	.50	10	5.00	7	3.50	17	8.50	.50
Passenger automobile	5.00	18	90.00	17	85.00	35	175.00	5.00
Truck or motor bus R & S	7.50	1	7.50	3	22.50	4	30.00	7.50
Truck or motor bus T & U	15.00	2	30.00	4	60.00	6	90.00	12.00
Truck or motor bus Y & Z								24.00
U. S. Army					15.00		15.00	
Miscellaneous								
Unclassified			14.85		*11.84*		3.01	
Total Revenue			$ 5,495.97		$ 5,468.60		$ 10,964.57	

Complainant's Exhibit No. 1

EXHIBIT IX.

COLLECTED FOR THE SIX MONTHS ENDED JUNE 30, 1927.

(Italics Indicate Red Figures)

	Revenue Collected Under Tariff P. S. C. Pa. No. 3													
		March		April		May		June		Total March 1 to June 30, 1927		Grand Total January 1 to June 30, 1927	
	Tariff Charge	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue
	$ .15	36,088	$ 5,413.20	47,897	$ 7,184.55	66,148	$ 9,922.20	68,236	$ 10,235.40	218,369	$ 32,755.35	246,821	$ 39,868.35
												11,850	1,777.50
	.08	29	2.32	37	2.96	28	2.24	42	3.36	136	10.88	138	11.14
	.25	1,425	356.25	1,606	401.50	1,707	426.75	1,508	377.00	6,246	1,561.50	8,353	2,088.25
	.13	1	13			3	.39			4	.52	7	.91
	.40	638	255.20	703	281.20	753	301.20	804	321.60	2,898	1,159.20	3,834	1,627.20
	.20			1	.20	6	1.20			7	1.40	7	1.40
	.60	374	224.40	380	228.00	424	254.40	455	273.00	1,633	979.80	2,227	1,425.30
	.30	6	1.80	2	.60	1	.30			9	2.70	9	2.70
	.75	162	121.50	146	109.50	222	166.50	238	178.50	768	576.00	1,044	852.00
	.38	14	5.32	1	.38			2	.76	17	6.46	19	7.46
	.25			2	.50	14	3.50	12	3.00	28	7.00	28	7.00
	.40			40	16.00	32	12.80	52	20.80	124	49.60	124	49.60
	.60			19	11.40	14	8.40	15	9.00	48	28.80	48	28.80
	.02	355	7.10	397	7.94	815	16.30	807	16.14	2,374	47.48	2,724	57.98
												8	1.60
	.15	23	3.45	26	3.90	17	2.55	22	3.30	88	13.20	94	15.00
												1	.15
	.07	6	.42	4	.28	4	.28	2	.14	16	1.12	23	1.96
	.05	9	.45	4	.20	4	.20	6	.30	23	1.15	30	1.85
	.02	553	11.06	738	14.76	695	13.90	670	13.40	2,656	53.12	3,130	67.34
	.03			5	.15	10	.30	3	.09	18	.54	18	.54
	.05	71	3.55	130	6.50	281	14.05	222	11.10	704	35.20	719	35.95
	.10	51	5.10	103	10.30	171	17.10	131	13.10	456	45.60	497	49.70
	3.00							1	3.00	1	3.00	1	3.00
	2.50					1	2.50	1	2.50	2	5.00	2	5.00
	.50	9	4.50	7	3.50	7	3.50	6	3.00	29	14.50	46	23.00
	5.00	33	165.00	25	125.00	29	145.00	28	140.00	115	575.00	150	750.00
	7.50	3	22.50	3	22.50	1	7.50	3	22.50	10	75.00	14	105.00
	12.00	7	84.00	6	72.00	4	48.00	4	48.00	21	252.00	27	342.00
	24.00			1	24.00			2	48.00	3	72.00	3	72.00
			7.50								7.50		22.50
			3.50		9.90						13.40		13.40
			1.99		8.10		3.30		6.83		16.24		19.25
			$ 6,696.26		$ 8,545.82		$ 11,374.36		$ 11,753.82		$ 38,370.26		$ 49,334.83

Complainant's Exhibit No. 1

EXHIBIT X.

DETAILED OPERATING REVENUE COLLECTED UNDER TARIFF P. S. C. Pa. No. 3 FOR THE SIX MONTHS ENDED DECEMBER

(Italics Indicate Red Figures)

Tariff Classification	Tariff Charge	July		August		September		October	
		Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue
Each automobile not exceeding 7 passenger seating capacity	.15	95,940	$ 14,391.00	95,015	$ 14,252.25	81,999	$ 12,299.85	64,888	$ 9,733.20
Each automobile trailer, ½ price	.08	69	5.52	80	6.40	49	3.92	28	2.24
Each R & S truck, 7 persons limit	.25	1,584	396.00	1,757	439.25	1,646	411.50	1,721	430.25
Each R & S trailer, ½ price	.13			2	.26			1	.13
Each T & U truck, 7 persons limit	.40	672	268.80	778	311.20	705	282.00	635	254.00
Each T & U trailer, ½ price	.20	1	.20			1	.20		
Each V & W truck, 7 persons limit	.60	440	264.00	515	309.00	493	295.80	480	288.00
Each V & W trailer, ½ price	.30	4	1.20	4	1.20	6	1.80	5	1.50
Each Y & Z truck, 7 persons limit	.75	178	133.50	202	151.50	226	169.50	211	158.25
Each Y & Z trailer, ½ price	.38	2	.76	2	.76	1	.38	1	.38
Each motor bus under 3,000 lbs.	.25	15	3.75	14	3.50	9	2.25	19	4.75
Each motor bus 3,000 to 4,999 lbs.	.40	28	11.20	32	12.80	26	10.40	39	15.60
Each motor bus 5,000 to 7,499 lbs.	.60	24	14.40	50	30.00	20	12.00	31	18.60
Each additional person in excess of 7	.02	461	9.22	890	17.80	576	11.52	832	16.64
Each wagon, with 2 horses	.15	11	1.65	26	3.90	12	1.80	5	.75
Each horse and rider	.07	1	.07	1	.07	2	.14	2	.14
Each horse without rider	.05					3	.15	1	.05
Each foot passenger	.02	674	13.48	694	13.88	582	11.64	622	12.44
Each head of horned cattle	.03								
Each motorcycle or bicycle	.05	269	13.45	224	11.20	255	12.75	187	9.35
Each motorcycle with side car	.10	165	16.50	144	14.40	128	12.80	104	10.40
Each traction engine	3.00	1	3.00	1	3.00				
Each traction engine trailer	1.50			1	1.50				
Each road roller	3.00					4	12.00		
Monthly Rates:									
Family	.50	8	4.00	5	2.50	5	2.50	6	3.00
Passenger automobile	5.00	31	155.00	28	140.00	25	125.00	26	130.00
Truck or motor bus R & S	7.50	3	22.50	2	15.00	2	15.00	2	15.00
Truck or motor bus T & U	12.00	2	24.00	4	48.00	7	84.00	5	60.00
Truck or motor bus V & W	18.00								
Truck or motor bus Y & Z	24.00			1	24.00	1	24.00	2	48.00
Unclassified			.30		1.50		1.14		.36
Total Revenue			$ 15,753.50		$ 15,814.87		$ 13,804.01		$ 11,212.31

EXHIBIT X.

UE COLLECTED UNDER TARIFF P. S. C. Pa. No. 3 FOR THE SIX MONTHS ENDED DECEMBER 31, 1927.

(Italics Indicate Red Figures)

July		August		September		October		November		December		Grand Total July 1 to Dec. 31, 1927	
Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue
$ 14,391.00	95,015	$ 14,252.25	81,999	$ 12,299.85	64,888	$ 9,733.20	57,136	$ 8,570.40	39.969	$ 5,995.35	434,947	$ 65,242.05
5.52	80	6.40	49	3.92	28	2.24	37	2.96	15	1.20	278	22.24
396.00	1,757	439.25	1,646	411.50	1,721	430.25	1,461	365.25	1,360	340.00	9,529	2,382.25
	2	.26			1	.13					3	.39
268.80	778	311.20	705	282.00	635	254.00	523	209.20	480	192.00	3,793	1,517.20
.20			1	.20							2	.40
264.00	515	309.00	493	295.80	480	288.00	340	204.00	364	218.40	2,632	1,579.20
1.20	4	1.20	6	1.80	5	1.50	3	.90			22	6.60
133.50	202	151.50	226	169.50	211	158.25	228	171.00	217	162.75	1,262	946.50
.76	2	.76	1	.38	1	.38	4	1.52			10	3.80
3.75	14	3.50	9	2.25	19	4.75	9	2.25	6	1.50	72	18.00
11.20	32	12.80	26	10.40	39	15.60	13	5.20	9	3.60	147	58.80
14.40	50	30.00	20	12.00	31	18.60	56	33.60	9	5.40	190	114.00
9.22	890	17.80	576	11.52	832	16.64	992	19.84	93	1.86	3,844	76.88
1.65	26	3.90	12	1.80	5	.75	12	1.80	11	1.65	77	11.55
.07	1	.07	2	.14	2	.14	2	.14			8	.56
			3	.15	1	.05	2	.10			6	.30
13.48	694	13.88	582	11.64	622	12.44	562	11.24	437	8.74	3,571	71.42
									5	.15	5	.15
13.45	224	11.20	255	12.75	187	9.35	96	4.80	39	1.95	1,070	53.50
16.50	144	14.40	128	12.80	104	10.40	66	6.60	30	3.00	637	63.70
3.00	1	3.00							1	3.00	3	9.00
	1	1.50									1	1.50
			4	12.00							4	12.00
4.00	5	2.50	5	2.50	6	3.00	5	2.50	4	2.00	33	16.50
155.00	28	140.00	25	125.00	26	130.00	18	90.00	20	100.00	148	740.00
22.50	2	15.00	2	15.00	2	15.00	2	15.00	2	15.00	13	97.50
24.00	4	48.00	7	84.00	5	60.00	4	48.00	3	36.00	25	300.00
									1	18.00	1	18.00
	1	24.00	1	24.00	2	48.00					4	96.00
.30		1.50		1.14		.96		.80		.35		11.13
$ 15,753.50		$ 15,814.87		$ 13,804.01		$ 11,212.31		$ 9,774.50		$ 7,111.90		$ 73,471.12

Complainant's Exhibit No. 1

EXHIBIT XI.

DETAILED OPERATING REVENUE COLLECTED UNDER TARIFF P. S. C. Pa. No. 3 FOR THE SIX MONTHS

(Italics Indicate Red Figures)

Tariff Classification	Tariff Charge	January		February		March		April	
		Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue
Each automobile not exceeding 7 passenger seating capacity	$ .15	33,572	$ 5,035.80	31,489	$ 4,723.35	39,454	$ 5,918.10	54,583	$ 8,187.45
Each trailer for above—½ price	.08	4	.32	13	1.04	30	2.40	27	2.16
Each R & S truck, 7 persons limit	.25	1,096	274.00	1,160	290.00	1,396	349.00	1,554	388.50
Each R & S trailer ½ price	.13	2	.26			1	.13		
Each T & U truck, 7 persons limit	.40	545	218.00	536	214.40	840	336.00	852	340.80
Each T & U trailer ½ price	.20			2	.40	3	.60	5	1.00
Each V & W truck, 7 persons limit	.60	287	172.20	350	210.00	439	263.40	493	295.80
Each V & W trailer ½ price	.30	2	.60			4	1.20	3	.90
Each Y & Z truck, 7 persons limit	.75	235	176.25	197	147.75	239	179.25	230	172.50
Each Y & Z trailer ½ price	.38			2	.76			4	1.52
Each motor bus under 3,000 lbs.	.25	3	.75	3	.75	4	1.00	5	1.25
Each motor bus 3,000 to 4,999 lbs.	.40	9	3.60	15	6.00	5	2.00	23	9.20
Each motor bus 5,000 to 7,499 lbs.	.60	32	19.20	65	39.00	98	58.80	93	55.80
Each motor bus 7,500 lbs. or over	.75	1	.75			11	8.25	52	39.00
All trucks and motor buses, for each person, other than driver, in excess of 6	.02	136	2.72	379	7.58	495	9.90	917	18.34
Each wagon or carriage, 2 horses or mules or less	.15	11	1.65	7	1.05	20	3.00	9	1.35
Each horse or mule, and rider	.07			5	.35	13	.91	8	.56
Each horse or mule, without rider	.05			3	.15	27	1.35	4	.20
Each foot passenger	.02	537	10.74	531	10.62	620	12.40	723	14.46
Each head of horned cattle	.03					4	.12		
Each motorcycle	.05	45	2.25	52	2.60	85	4.25	125	6.25
Each motorcycle with side car	.10	24	2.40	17	1.70	34	3.40	76	7.60
Each traction engine	3.00					2	6.00		
Each road roller	2.50							1	2.50
Each steam or gasoline engine well drill	2.50			1	2.50	1	2.50		
Monthly Rates:									
Family	.50	9	4.50	4	2.00	6	3.00	7	3.50
Passenger automobile	5.00	17	85.00	18	90.00	28	140.00	36	180.00
Truck or motor bus R & S	7.50	3	22.50	2	15.00	3	22.50	3	22.50
Truck or motor bus T & U	12.00	1	12.00						
Truck or motor bus V & W	18.00	2	36.00	2	36.00	2	36.00	2	36.00
Truck or motor bus Y & Z	24.00							1	24.00
Trailer for Y & Z truck	12.00							1	12.00
Unclassified			.58		.85		1.80		2.92
Total Revenue			$ 6,082.07		$ 5,803.85		$ 7,367.26		$ 9,822.22

EXHIBIT XI.

RATING REVENUE COLLECTED UNDER TARIFF P. S. C. Pa. No. 3 FOR THE SIX MONTHS ENDED JUNE 30, 1928.

(Italics Indicate Red Figures)

January		February		March		April		May		June		Grand Total Jan. 1 to June 30, 1928	
Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue
572	$ 5,035.80	31,489	$ 4,723.35	39,454	$ 5,918.10	54,583	$ 8,187.45	65.621	$ 9,843.15	77,730	$ 11,659.50	302,449	$ 45,367.35
4	.32	13	1.04	30	2.40	27	2.16	16	1.28	33	2.64	123	9.84
096	274.00	1,160	290.00	1,396	349.00	1,554	388.50	1,753	438.25	1,592	398.00	8,551	2,137.75
2	.26			1	.13							3	.39
545	218.00	536	214.40	840	336.00	852	340.80	935	374.00	899	359.60	4,607	1,842.80
		2	.40	3	.60	5	1.00	2	.40	3	.60	15	3.00
287	172.20	350	210.00	439	263.40	493	295.80	644	386.40	696	417.60	2,909	1,745.40
2	.60			4	1.20	3	.90	11	3.30	6	1.80	26	7.80
985	176.25	197	147.75	239	179.25	230	172.50	259	194.25	289	216.75	1,449	1,086.75
		2	.76			4	1.52	6	2.28	5	1.90	17	6.46
3	.75	3	.75	4	1.00	5	1.25	28	7.00	30	7.50	73	18.25
9	3.60	15	6.00	5	2.00	23	9.20	41	16.40	39	15.60	132	52.80
32	19.20	65	39.00	98	58.80	93	55.80	105	63.00	90	54.00	483	289.80
1	.75			11	8.25	52	39.00	118	88.50	121	90.75	303	227.25
136	2.72	379	7.58	495	9.90	917	18.34	1,811	36.22	2,454	49.08	6,192	123.84
11	1.65	7	1.05	20	3.00	9	1.35	8	1.20	18	2.70	73	10.95
		5	.35	13	.91	8	.56	4	.28	1	.07	31	2.17
		3	.15	27	1.35	4	.20	2	.10	5	.25	41	2.05
537	10.74	531	10.62	620	12.40	723	14.46	736	14.72	764	15.28	3,911	78.22
				4	.12							4	.12
45	2.25	52	2.60	85	4.25	125	6.25	219	10.95	233	11.65	759	37.95
24	2.40	17	1.70	34	3.40	76	7.60	136	13.60	101	10.10	388	38.80
				2	6.00					1	3.00	3	9.00
						1	2.50					1	2.50
		1	2.50	1	2.50			1	2.50			3	7.50
9	4.50	4	2.00	6	3.00	7	3.50	8	4.00	7	3.50	41	20.50
17	85.00	18	90.00	28	140.00	36	180.00	34	170.00	36	180.00	169	845.00
3	22.50	2	15.00	3	22.50	3	22.50	3	22.50	4	30.00	18	135.00
1	12.00							2	24.00	1	12.00	4	48.00
2	36.00	2	36.00	2	36.00	2	36.00	1	18.00	2	36.00	11	198.00
						1	24.00	2	48.00	1	24.00	4	96.00
						1	12.00	1	12.00	1	12.00	3	36.00
	.58		.85		1.80		2.02		5.06		10.21		15.58
	$ 6,082.07		$ 5,803.85		$ 7,367.26		$ 9,822.22		$ 11,801.34		$ 13,626 08		$ 54,502.82

Complainant's Exhibit No. 1

EXHIBIT XII.

DETAILED OPERATING REVENUE COLLECTED UNDER TARIFF P. S. C. Pa. No. 3 FOR THE SIX MONTHS ENDED DEC

Tariff Classification	Tariff Charge	July		August		September		October	
		Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue
Each automobile not exceeding 7 passenger seating capacity	$ .15	94,009	$ 14,101.35	86,476	$ 12,971.40	85,256	$ 12,788.40	77,034	$ 11,555.10
Each trailer for above—½ price	.08	55	4.40	48	3.84	51	4.08	39	3.12
Each R & S truck, 7 persons limit	.25	1,547	386.75	1,687	421.75	1,634	408.50	1,826	456.50
Each R & S trailer, ½ price	.13	1	.13			6	.78		
Each T & U truck, 7 persons limit	.40	808	323.20	748	299.20	659	263.60	751	300.40
Each T & U trailer, ½ price	.20	2	.40	4	.80	1	.20	1	.20
Each V & W truck, 7 persons limit	.60	540	324.00	540	324.00	643	385.80	589	353.40
Each V & W trailer, ½ price	.30	4	1.20	16	4.80	12	3.60	19	5.70
Each Y & Z truck, 7 persons limit	.75	224	168.00	258	193.50	228	171.00	293	219.75
Each Y & Z trailer, ½ price	.38	4	1.52	8	3.04	20	7.60	47	17.86
Each motor bus under 3,000 lbs.	.25	14	3.50	22	5.50	9	2.25	9	2.25
Each motor bus 3,000 to 4,999 lbs.	.40	19	7.60	22	8.80	20	8.00	32	12.80
Each motor bus 5,000 to 7,499 lbs.	.60	129	77.40	171	102.60	149	89.40	149	89.40
Each motor bus 7,500 lbs. or over	.75	133	99.75	114	85.50	117	87.75	118	88.50
Each person, trucks & motor buses, in excess of 7	.02	2,710	54.20	4,272	85.44	2,739	54.78	1,743	34.86
Each wagon or carriage, 2 horses or mules or less	.15	12	1.80	1	.15	4	.60	3	.45
Each horse or mule, and rider	.07	2	.14	2	.14			5	.35
Each horse or mule, without rider	.05	2	.10			1	.05	1	.05
Each foot passenger	.02	669	13.38	539	10.78	500	10.00	492	9.84
Each bicycle	.05					7	.35	11	.55
Each motorcycle	.05	258	12.90	241	12.05	201	10.05	145	7.25
Each motorcycle with side car	.10	113	11.30	96	9.60	75	7.50	60	6.00
Each traction engine	3.00								
Monthly Rates:									
Family	.50	6	3.00	1	.50	5	2.50	5	2.50
Passenger automobile	5.00	42	210.00	30	150.00	36	180.00	38	190.00
Truck or motor bus R & S	7.50	4	30.00	5	37.50	5	37.50	4	30.00
Truck or motor bus T & U	12.00	1	12.00	2	24.00	2	24.00	1	12.00
Truck or motor bus V & W	18.00	3	54.00	1	18.00	2	36.00	1	18.00
Truck or motor bus Y & Z	24.00	1	24.00	1	24.00	1	24.00	1	24.00
Trailer for Y & Z truck	12.00	1	12.00	2	24.00	1	12.00	1	12.00
Unclassified			9.13		22.61		11.21		24.70
Total Revenue			$ 15,947.15		$ 14,843.50		$ 14,631.50		$ 13,477.53

EXHIBIT XII.

VENUE COLLECTED UNDER TARIFF P. S. C. Pa. No. 3 FOR THE SIX MONTHS ENDED DECEMBER 31, 1928.

July		August		September		October		November		December		Grand Total July 1 to Dec. 31, 1928	
Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue
909	$ 14,101.35	86,476	$ 12,971.40	85,256	$ 12,788.40	77,034	$ 11,555.10	65,430	$ 9,814.50	60,812	$ 9,121.80	469,017	$ 70,352.55
55	4.40	48	3.84	51	4.08	39	3.12	38	3.04	31	2.48	262	20.96
1,547	386.75	1,687	421.75	1,634	408.50	1,826	456.50	1,568	392.00	1,518	379.50	9,780	2,445.00
1	.13			6	.78			2	.26			9	1.17
808	323.20	748	299.20	659	263.60	751	300.40	633	253.20	665	266.00	4,264	1,705.60
2	.40	4	.80	1	.20	1	.20	4	.80	3	.60	15	3.00
840	324.00	540	324.00	643	385.80	589	353.40	566	339.60	510	306.00	3,388	2,032.80
4	1.20	16	4.80	12	3.60	19	5.70	30	9.00	5	1.50	86	25.80
224	168.00	258	193.50	228	171.00	293	219.75	214	160.50	152	114.00	1,369	1,026.75
4	1.52	8	3.04	20	7.60	47	17.86	21	7.98	18	6.84	118	44.84
14	3.50	22	5.50	9	2.25	9	2.25	8	2.00	4	1.00	66	16.50
19	7.60	22	8.80	20	8.00	32	12.80	30	12.00	13	5.20	136	54.40
129	77.40	171	102.60	149	89.40	149	89.40	138	82.80	171	102.60	907	544.20
133	99.75	114	85.50	117	87.75	118	88.50	62	46.50	50	37.50	594	445.50
2710	54.20	4,272	85.44	2,739	54.78	1,743	34.86	1,234	24.68	1,849	36.98	14,547	290.94
12	1.80	1	.15	4	.60	3	.45	4	.60	2	.30	26	3.90
2	.14	2	.14			5	.35	1	.07			10	.70
2	.10			1	.05	1	.05					4	.20
569	13.38	539	10.78	500	10.00	492	9.84	507	10.14	571	11.42	3,278	65.56
				7	.35	11	.55	13	.65	13	.65	44	2.20
258	12.90	241	12.05	201	10.05	145	7.25	77	3.85	61	3.05	983	49.15
113	11.30	96	9.60	75	7.50	60	6.00	31	3.10	17	1.70	392	39.20
										1	3.00	1	3.00
6	3.00	1	.50	5	2.50	5	2.50	4	2.00	3	1.50	24	12.00
42	210.00	30	150.00	36	180.00	38	190.00	32	160.00	34	170.00	212	1,060.00
4	30.00	5	37.50	5	37.50	4	30.00	4	30.00	4	30.00	26	195.00
1	12.00	2	24.00	2	24.00	1	12.00			1	12.00	7	84.00
3	54.00	1	18.00	2	36.00	1	18.00	2	36.00	2	36.00	11	198.00
1	24.00	1	24.00	1	24.00	1	24.00	1	24.00			5	120.00
1	12.00	2	24.00	1	12.00	1	12.00	1	12.00			6	72.00
	9.13		22.61		11.21		24.70		13.47		.90		82.02
	$ 15,947.15		$ 14,843.50		$ 14,631.50		$ 13,477.53		$ 11,444.74		$ 10,652.52		$ 80,996.94

Complainant's Exhibit No. 1

EXHIBIT XIII.

DETAILED OPERATING REVENUE COLLECTED UNDER TARIFF P. S. C. Pa. No. 3 FOR THE SIX MONTHS ENDED JUNE 3

(Italics Indicate Red Figures)

Tariff Classification	Tariff Charge	January		February		March		April	
		Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue
Each automobile not exceeding 7 passenger seating capacity	$ .15	37,269	$ 5,590.35	36,765	$ 5,514.75	61,491	$ 9,223.65	68,878	$ 10,331.70
Each trailer for above ½ price	.08	16	1.28	9	.72	26	2.08	27	2.16
Each R & S truck, 7 persons limit	.25	1,319	329.75	1,144	286.00	1,681	420.25	2,002	500.50
Each R & S trailer ½ price	.13	1	.13	6	.78	2	.26	3	.39
Each T & U truck, 7 persons limit	.40	666	266.40	722	288.80	973	389.20	1,287	514.80
Each T & U trailer ½ price	.20	1	.20	1	.20			11	2.20
Each V & W truck, 7 person limit	.60	560	336.00	540	324.00	616	369.60	801	480.60
Each V & W trailer ½ price	.30	2	.60	2	.60	11	3.30	19	5.70
Each Y & Z truck, 7 persons limit	.75	185	138.75	222	166.50	229	171.75	341	255.75
Each Y & Z trailer ½ price	.38	32	12.16	34	12.92	34	12.92	39	14.82
Each motor bus under 3,000 lbs.	.25	6	1.50	6	1.50	4	1.00	7	1.75
Each motor bus 3,000 to 4,999 lbs.	.40	22	8.80	16	6.40	20	8.00	40	16.00
Each motor bus 5,000 to 7,499 lbs.	.60	184	110.40	163	97.80	195	117.00	194	116.40
Each motor bus 7,500 lbs. or over	.75	4	3.00			3	2.25	18	13.50
Each additional person in excess of 7	.02	1,370	27.40	837	16.74	2,011	40.22	2,841	56.82
Each wagon or carriage, 2 horses or mules or less	.15	1	.15	4	.60	11	1.65	8	1.20
Each horse or mule, and rider	.07			1	.07	4	.28	3	.21
Each horse or mule, without rider	.05			1	.05	8	.40		
Each foot passenger	.02	78	1.56	380	7.60	517	10.34	479	9.58
Each bicycle	.05	4	.20	2	.10	4	.20	8	.40
Each motorcycle	.05	22	1.10	21	1.05	89	4.45	179	8.95
Each motorcycle with side car	.10	6	.60	2	.20	19	1.90	43	4.30
Each steam or gasoline engine well drill	2.50					1	2.50		
Monthly Rates:									
Family rates (foot passengers)	.50	4	2.00	4	2.00	3	1.50	4	2.00
Passenger automobile	5.00	32	160.00	32	160.00	38	190.00	46	230.00
Truck or motor bus R & S	7.50	5	37.50	5	37.50	5	37.50	2	15.00
Truck or motor bus T & U	12.00							2	24.00
Truck or motor bus V & W	18.00	2	36.00	2	36.00	3	54.00	3	54.00
Truck or motor bus Y & Z	24.00	2	48.00	1	24.00	2	48.00	2	48.00
Trailer for Y & Z	12.00	2	24.00	1	12.00	1	12.00	1	12.00
Unclassified			*4.38*		*.05*		*.68*		7.51
Total Revenue			$ 7,133.45		$ 6,998.83		$ 11,125.52		$ 12,730.24

EXHIBIT XIII.

REVENUE COLLECTED UNDER TARIFF P. S. C. Pa. No. 3 FOR THE SIX MONTHS ENDED JUNE 30, 1929.

(Italics Indicate Red Figures)

January		February		March		April		May		June		Grand Total Jan. 1 to June 30, 1929	
Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue
7,269	$ 5,590.35	36,765	$ 5,514.75	61,491	$ 9,223.65	68,878	$ 10,331.70	86,361	$ 12,954.15	105,203	$ 15,780.45	395.967	$ 59,395.05
16	1.28	9	.72	26	2.08	27	2.16	28	2.24	53	4.24	159	12.72
1,319	329.75	1,144	286.00	1,681	420.25	2,002	500.50	2,374	593.50	2,208	552.00	10,728	2,682.00
1	.13	6	.78	2	.26	3	.39	4	.52	1	.13	17	2.21
666	266.40	722	288.80	973	389.20	1,287	514.80	1,622	648.80	1,469	587.60	6,739	2,695.60
1	.20	1	.20			11	2.20	5	1.00	3	.60	21	4.20
560	336.00	540	324.00	616	369.60	801	480.60	1,059	635.40	940	564.00	4,516	2,709.60
2	.60	2	.60	11	3.30	19	5.70	6	1.80	15	4.50	55	16.50
185	138.75	222	166.50	229	171.75	341	255.75	375	281.25	382	286.50	1,734	1,300.50
32	12.16	34	12.92	34	12.92	39	14.82	22	8.36	47	17.86	208	79.04
6	1.50	6	1.50	4	1.00	7	1.75	10	2.50	25	6.25	58	14.50
22	8.80	16	6.40	20	8.00	40	16.00	64	25.60	69	27.60	231	92.40
184	110.40	163	97.80	195	117.00	194	116.40	285	171.00	455	273.00	1,476	885.60
4	3.00			3	2.25	18	13.50	15	11.25	5	3.75	45	33.75
1,370	27.40	837	16.74	2,011	40.22	2,841	56.82	3,857	77.14	6,304	126.08	17,220	344.40
1	.15	4	.60	11	1.65	8	1.20	4	.60	11	1.65	39	5.85
		1	.07	4	.28	3	.21	3	.21	2	.14	13	.91
		1	05	8	.40			1	.05	2	.10	12	.60
78	1.56	380	7.60	517	10.34	479	9.58	577	11.54	506	10.12	2,537	50.74
4	.20	2	.10	4	.20	8	.40	19	.95	11	.55	48	2.40
22	1.10	21	1.05	89	4.45	179	8.95	183	9.15	259	12.95	753	37.65
6	.60	2	20	19	1.90	43	4.30	47	4.70	67	6.70	184	18.40
				1	2.50			2	5.00	1	2.50	4	10.00
4	2.00	4	2.00	3	1.50	4	2.00	4	2.00	1	.50	20	10.00
32	160.00	32	160.00	38	190.00	46	230.00	45	225.00	46	230.00	239	1,195.00
5	37.50	5	37.50	5	37.50	2	15.00	4	30.00	8	60.00	29	217.50
						2	24.00	1	12.00			3	35.00
2	36.00	2	36.00	3	54.00	3	54.00	5	90.00	3	54.00	18	324.00
2	48.00	1	24.00	2	48.00	2	48.00	1	24.00	2	48.00	10	240.00
2	24.00	1	12.00	1	12.00	1	12.00	1	12.00	1	12.00	7	84.00
	4.38		*.05*		*.68*		7.51		*6.34*		*20.07*		*24.01*
	$ 7,133.45		$ 6,998.83		$ 11,125.52		$ 12,730.24		$ 15,835.37		$ 18,653.70		$ 72,477.11

Complainant's Exhibit No. 1

EXHIBIT XIV.

DETAILED OPERATING REVENUE COLLECTED UNDER TARIFF P. S. C. Pa. No. 4 FOR THE SIX MONTHS EN

(Italics Indicate Red Figures)

Tariff Classification	Tariff Charge	July		August		September		October	
		Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue
Each automobile not exceeding 7 passenger seating capacity	$ .10	128,116	$ 12,811.60	140,605	$ 14,060.50	113,060	$ 11,306.00	89,776	$ 8,977.60
Each R & S truck	.10	2,464	246.40	2,728	272.80	2,345	234.50	2,447	244.70
Each R & S trailer ½ price	.05	73	3.65	100	5.00	65	3.25	42	2.10
Each T & U truck	.20	1,498	299.60	1,456	291.20	1,213	242.60	1,240	248.00
Each T & U trailer ½ price	.10	5	.50	9	.90	1	.10	2	.20
Each V & W truck	.30	1,065	319.50	1,155	346.50	924	277.20	933	279.90
Each V & W trailer ½ price	.15	21	3.15	20	3.00	22	3.30	31	4.65
Each Y & Z truck	.60	381	228.60	419	251.40	394	236.40	416	249.60
Each Y & Z trailer ½ price	.30	42	12.60	63	18.90	65	19.50	88	26.40
Each motor bus under 3,000 lbs.	.10	32	3.20	45	4.50	21	2.10	2	.20
Each motor bus 3,000 to 4,999 lbs.	.20	59	11.80	100	20.00	86	17.20	92	18.40
Each motor bus 5,000 to 7,499 lbs.	.30	526	157.80	635	190.50	525	157.50	424	127.20
Each motor bus 7,500 lbs. or over	.60	4	2.40	2	1.20	2	1.20	5	3.00
Each wagon or carriage, 2 horses or mules or less	.10	4	.40	5	.50	4	.40	3	.30
Each horse or mule, and rider	.05	1	.05	2	.10	1	.05	38	1.90
Each horse or mule, without rider	.05			1	.05				
Each bicycle	.05	8	.40	25	1.25	6	.30	3	.15
Each motorcycle	.05	364	18.20	333	16.65	251	12.55	185	9.25
Each traction engine	3.00	1	3.00	1	3.00				
Each steam or gasoline engine well drill	2.50								
Monthly Rates:									
Passenger automobile	4.00	57	228.00	46	184.00	56	224.00	50	200.00
Truck or motor bus R & S	4.00	10	40.00	3	12.00	1	4.00	6	24.00
Truck or motor bus T & U	7.50	1	7.50	2	15.00	3	22.50	3	22.50
Truck or motor bus V & W	10.00	1	10.00	1	10.00	1	10.00	2	20.00
Truck or motor bus Y & Z	20.00	2	40.00	2	40.00	2	40.00	2	40.00
Trailer for Y & Z truck	10.00	1	10.00			1	10.00	1	10.00
Truck or motor bus A to K	4.00								
Truck or motor bus L to N	7.50								
Truck or motor bus P to R	10.00								
Truck or motor bus S to U	20.00								
Unclassified			*48.84*		1.51				
Total Revenue			$ 14,409.51		$ 15,750.46		$ 12,824.65		$ 10,510.05

EXHIBIT XIV.

ATING REVENUE COLLECTED UNDER TARIFF P. S. C. Pa. No. 4 FOR THE SIX MONTHS ENDED DECEMBER 31, 1929.

(Italics Indicate Red Figures)

July		August		September		October		November		December		Grand Total July 1 to Dec. 31, 1929	
riff nit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue	Tariff Unit	Revenue
116	$ 12,811.60	140,605	$ 14,060.50	113,060	$ 11,306.00	89,776	$ 8,977.60	72,383	$ 7,238.30	59,422	$ 5,942.20	603,362	$ 60,336.20
464	246.40	2,728	272.80	2,345	234.50	2,447	244.70	1,976	197.60	1,917	191.70	13,877	1,387.70
73	3.65	100	5.00	65	3.25	42	2.10	39	1.95	31	1.55	350	17.50
498	299.60	1,456	291.20	1,213	242.60	1,240	248.00	979	195.80	954	190.80	7,340	1,468.00
5	.50	9	.90	1	.10	2	.20	10	1.00	2	.20	29	2.90
065	319.50	1,155	346.50	924	277.20	933	279.90	598	179.40	653	195.90	5,328	1,598.40
21	3.15	20	3.00	22	3.30	31	4.65	12	1.80	11	1.65	117	17.55
381	228.60	419	251.40	394	236.40	416	249.60	356	213.60	408	244.80	2,374	1,424.40
42	12.60	63	18.90	65	19.50	88	26.40	53	15.90	6	1.80	317	95.10
32	3.20	45	4.50	21	2.10	2	.20	33	3.30	25	2.50	158	15.80
59	11.80	100	20.00	86	17.20	92	18.40	42	8.40	48	9.60	427	85.40
526	157.80	635	190.50	525	157.50	424	127.20	328	98.40	333	99.90	2,771	831.30
4	2.40	2	1.20	2	1.20	5	3.00					13	7.80
4	.40	5	.50	4	.40	3	.30	5	.50	4	.40	25	2.50
1	.05	2	.10	1	.05	38	1.90			9	.45	51	2.55
		1	.05									1	.05
8	.40	25	1.25	6	.30	3	.15	4	.20	2	.10	48	2.40
364	18.20	333	16.65	251	12.55	185	9.25	112	5.60	37	1.85	1,282	64.10
1	3.00	1	3.00									2	6.00
										1	2.50	1	2.50
57	228.00	46	184.00	56	224.00	50	200.00	45	180.00	37	148.00	291	1,164.00
10	40.00	3	12.00	1	4.00	6	24.00	4	16.00			24	96.00
1	7.50	2	15.00	3	22.50	3	22.50	2	15.00			11	82.50
1	10.00	1	10.00	1	10.00	2	20.00	2	20.00			7	70.00
2	40.00	2	40.00	2	40.00	2	40.00	2	40.00			10	200.00
1	10.00			1	10.00	1	10.00	1	10.00	1	10.00	5	50.00
										4	16.00	4	16.00
										3	22.50	3	22.50
										2	20.00	2	20.00
										1	20.00	1	20.00
	48.84		1.51										*47.33*
	$ 14,409.51		$ 15,750.46		$ 12,824.65		$ 10,510.05		$ 8,442.75		$ 7,124.40		$ 69,061.82

EXHIBIT XV.

DETAILED OPERATING REVENUE COLLECTED UNDER TARIFF P. S. C. Pa. No. 4 FOR MONTHS OF JANUARY AND FEBRUARY, 1930

Tariff Classification	Tariff Charge	January Tariff Unit	January Revenue	February Tariff Unit	February Revenue
Each automobile not exceeding 7 passenger seating capacity	$ .10	42,609	$ 4,260.90	44,879	$ 4,487.90
Each A to K truck	.10	1,715	171.50	1,688	168.80
Each A to K trailer, ½ price	.05	13	.65	5	.25
Each L to N truck	.20	995	199.00	991	198.20
Each L to N trailer, ½ price	.10	10	1.00	14	1.40
Each P & R truck	.30	673	201.90	745	223.50
Each P & R trailer, ½ price	.15	16	2.40	10	1.50
Each S & U truck	.60	542	325.20	542	325.20
Each S & U trailer, ½ price	.30	31	9.30	4	1.20
Each motor bus under 3,000 lbs.	.10	46	4.60	21	2.10
Each motor bus 3,000 lbs. to 4,999 lbs.	.20	33	6.60	19	3.80
Each motor bus 5,000 lbs. to 7,499 lbs.	.30	394	118.20	347	104.10
Each motor bus 7,500 lbs. or over	.60	2	1.20	3	1.80
Each horse and wagon	.10	2	.20	2	.20
Each horse and rider	.05	9	.45	4	.20
Each motorcycle	.05	28	1.40	40	2.00
Each road roller	3.00	1	3.00		
Monthly Rates:					
Passenger automobile	4.00	33	132.00	31	124.00
A to K truck or motor bus	4.00	1	4.00	3	12.00
L to N truck or motor bus	7.50	3	22.50	3	22.50
P & R truck or motor bus	10.00	1	10.00	2	20.00
S & U truck or motor bus	20.00	1	20.00	2	40.00
Total Revenue			$ 5,496.00		$ 5,740.65

Complainant's Exhibit No. 1

459a

EXHIBIT XVI.

ANALYSIS OF OFFICERS' SALARIES FOR THE YEARS 1924 TO 1929, INCLUSIVE

Name	Official Title	1924	1925	1926	1927	1928	1929
William Jennings	Pres.	$ 1,200	$ 1,200	$ 1,200	$	$	$
Mrs. Belle Jennings	Vice Pres.				1,200	1,200	1,200
C. W. Lynch	Pres.	1,200	1,200	1,200	1,200	1,200	1,200
William Wilts	Sec'y.	1,200	1,200	1,200	1,200	1,200	1,200
P. F. Duncan	Treas.	1,200	1,200	1,200	2,400	2,400	2,400
Total		$ 4,800	$ 4,800	$ 4,800	$ 6,000	$ 6,000	$ 6,000

ANALYSIS OF CASH DIVIDENDS ON COMMON STOCK PAID DURING THE YEARS.

William Jennings	$ 4,500	$ 4,500	$ 2,250	$	$	$
William Jennings Estate				6,750(a)	6,500	7,500
C. W. Lynch	4,500	4,500	2,250	6,750(a)	6,500	7,500
William Wills	4,500	4,500	2,250	6,750(a)	6,500	7,500
P. F. Duncan	4,500	4,500	2,250	6,750(a)	6,500	7,500
Total	$ 18,000	$ 18,000	$ 9,000	$ 27,000	$ 26,000	$ 30,000

(a) $2,250 of each of these amounts applied to dividends applicable to 1926

EXHIBIT XVII.

ANALYSIS OF ACCOUNT "GENERAL CHARGES" FOR THE YEARS 1924 TO 1929, INCLUSIVE

(Italics Indicate Red Figures)

Classification	1924	1925	1926	1927	1928	1929	Amounts Allowed by Commission's Decision of June 6, 1926
Public Service Commission Expenses							
Legal	$	$	$ 1,500.00	$ 1,552.35	$	$	$
Engineering				2,084.70			
Printing briefs, etc.		138.36	1,613.30				
Printing rebate slips		20.00	426.25	154.50			
Coal, Light and Telephone							
Coal	58.50	346.10	284.15	300.95	279.15	346.65	
Electric Light (Bridge and house)		570.37	1,029.40	1,027.98	998.86	1,084.66	1,550.00
Telephone rental	18.00	48.26	18.00	18.00	18.00	18.00	
Legal Service							
Retainer fees, etc.	135.00	57.90	100.00	100.00	100.00	100.00	150.00
Postage and Printing							
Postage, revenue stamps, express, etc.	135.00	22.94	26.97	28.08	35.00	51.26	
Printing forms, tariffs, etc.	27.35	118.00	31.75	32.30	88.25	138.20	500.00
Maintenance, Hose, Pipe, Supplies and Miscellaneous							
Hose reels	70.00						
Belts, punches, changers, etc.	16.00		24.72			14.10	
Transportation expenses		35.40	45.80	49.20	60.80	55.20	
Advertising		123.33	189.20	80.00		126.25	
Accounting Services		215.31	190.65	180.55	342.00	182.00	
Trustees' fees		33.75	67.50	65.17	63.85	25.90	1,800.00
Water rent	25.00	25.00	25.00	25.00	25.00	25.00	200.00
Installation of telephones on old bridge	78.32						
Sale of lumber			*2.94*				
Picture post cards of new Bridge (net)			23.87	40.00			
Electric light bulbs		118.10	181.05	120.60	42.00	85.60	
Miscellaneous	239.44	98.51	338.13	196.72	*265.37*	191.42	
Advertising Bonds (a)				61.05	88.08	100.00	
Advertising and Printing re Sale of Old Bridge (b)		50.10					
Bonus re Increasing of Capital Stock, Filing Fees, etc. (c)		1,378.34					
Closing Fee re Mortgage (a)						150.00	
Stove (d)			27.70		121.10		
Office Furniture (Chairs, screens, filing cabinets, etc.) (d)		39.00			122.91		
Contributions (e)		225.00	50.00	150.00	50.00	150.00	
Totals	$ 802.61	$ 3,663.77	$ 6,191.50	$ 6,267.15	$ *2,700.97*	$ *2,845.14*	

(a) These items should have been charged to Bond Expense and amortized against income available for fair return over the life of the bonds.

(b) This item should have been charged against the consideration received from the old bridge.

(c) This item should have been capitalized and charged to organization expense.

(d) These items should have been charged to a fixed capital equipment account.

(e) These items, as pointed out in the Commission's decision of June 8, 1926, are payable out of fair return and should therefore have been charged to surplus.

Complainant's Exhibit No. 1

EXHIBIT XVIII.

STATEMENT SHOWING THE TAXES PAID AND/OR ACCRUED FROM 1924 TO 1929, INCLUSIVE, TOGETHER WITH THE YEARS TO WHICH THESE TA

Kind of Tax	Payments Charged to Operating Expenses							Years to Which Applicabl			
	1924	1925	1926	1927	1928	1929	Unknown	1923	1924	1925	1926
Federal:											
Income Tax	$ 3,647.20	$ 6,419.25	$ 1,948.45	$ 6,453.04	$ 7,760.88	$ 2,087.60	$	$ 3,647.20	$ 6,419.25	$ 2,149.72	$ 6,453.04
Capital Stock Tax	317.00	414.00							317.00	414.00	
Income Tax Paid at Source (2%)	45.00	175.80	349.50	324.90	304.57	189.00	45.00		175.80	349.50	324.90
State—Pennsylvania:											
Capital Stock	250.00	1,500.00	2,125.00	2,200.00	2,125.00			250.00	1,500.00	2,125.00	2,200.00
Corporate Loans	190.00	841.70	1,436.98	1,330.82	1,190.57			190.00	841.70	1,436.98	1,330.82
Emergency Profits		390.30						151.77	238.53		
State—Maryland:											
Tax on Bonds			6.00	5.85	6.00	6.00				6.00	5.85
Local	20.83	44.06	50.33	50.25	50.33	102.18			20.83	44.06	50.33
Revenue Stamps				11.00							11.00
Totals	$ 4,470.03	$ 9,785.11	$ 5,916.26	$ 10,375.86	$ 11,437.35	$ 2,384.78	$ 45.00	$ 4,238.97	$ 9,513.11	$ 6,525.26	$ 10,375.94

(a) Represents taxes accrued for 1928 and charged to "Reserve for Federal Tax."

(b) Represents taxes accrued for 1929 and charged to "Reserve for Federal Tax."

(c) The company has received assessments from the Department of Revenue for its 1928 corporate loans taxes amounting to $1,107.57, and its capital stock taxes amounting to $2,125.00.

(d) Corporate loans and capital stock taxes for 1929 not yet assessed.

EXHIBIT XVIII.

TE TAXES PAID AND/OR ACCRUED FROM 1924 TO 1929, INCLUSIVE, TOGETHER WITH THE YEARS TO WHICH THESE TAXES WERE APPLICABLE

Payments Charged to Operating Expenses						Years to Which Applicable						
1925	1926	1927	1928	1929	Unknown	1923	1924	1925	1926	1927	1928	1929
6,419.25	$ 1,948.45	$ 6,453.04	$ 7,760.88	$ 2,087.60	$	$ 3,647.20	$ 6,419.25	$ 2,149.72	$ 6,453.04	$ 7,559.61	$ 8,700.36(a)	$2,087.60(b)
414.00							317.00	414.00				
175.80	349.50	324.90	304.57	189.00	45.00		175.80	349.50	324.90	304.57	189.00	
1,500.00	2,125.00	2,200.00	2,125.00			250.00	1,500.00	2,125.00	2,200.00	2,125.00		
841.70	1,436.98	1,330.82	1,190.57			190.00	841.70	1,436.98	1,330.82	1,190.57	(c)	(d)
390.30						151.77	238.53					
	6.00	5.85	6.00	6.00				6.00	5.85	6.00	6.00	
44.06	50.33	50.25	50.33	102.18			20.83	44.06	50.33	50.25	50.33	102.18
		11.00							11.00			
9,785.11	$ 5,916.26	$ 10,375.86	$ 11,437.35	$ 2,384.78	$ 45.00	$ 4,238.97	$ 9,513.11	$ 6,525.26	$ 10,375.94	$ 11,236.00	$ 8,945.69	$ 2,189.78

(a) Represents taxes accrued for 1928 and charged to "Reserve for Federal Tax."

(b) Represents taxes accrued for 1929 and charged to "Reserve for Federal Tax."

(c) The company has received assessments from the Department of Revenue for its 1928 corporate loans taxes amounting to $1,107.57, and its capital stock taxes amounting to $2,125.00.

(d) Corporate loans and capital stock taxes for 1929 not yet assessed.

IN THE

Superior Court of Pennsylvania

Harrisburg District

No. 2 March Term, 1933

CLARK'S FERRY BRIDGE COMPANY,

Appellant

vs.

THE PUBLIC SERVICE COMMISSION OF THE COMMONWEALTH OF PENNSYLVANIA,

Appellee

RECORD
VOLUME II.

Appeal from Order of The Public Service Commission of the Commonwealth of Pennsylvania in Complaint Docket No. 8219.

GEO. ROSS HULL,
SNYDER, MILLER, HULL AND HULL,
208-210 Walnut Street,
Harrisburg, Pa.,
Attorneys for Appellant

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	Direct Ex.	Cross Ex.
James E. Keane	40a, 169a	43a, 80a, 169a
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Recross Examination		49a, 87a
Lynn B. Curry	220a	230a, 276a, 357a
Redirect Examination		232a, 390a, 409a
Recross Examination		408a, 409a

Respondent's Testimony

James W. White	51a	66a, 117a
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Paul B. Johnson	70a	77a, 89a, 128a
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Nathan B. Jacobs	130a, 166a	142a, 167a
Redirect Examination		146a
Frank M. Masters	147a, 170a	163a, 176a
P. F. Duncan	181a	185a
Wilfred Jupenlaz	188a, 354a	241a, 355a

IV. Exhibits:

Complainant's Exhibits

Complainant's Exhibit No. 1—Report of Bureau of Accounts and Statistics of the Commission on its Examination of Records of Clark's Ferry Bridge Co. (R. p. 41a) with Exhibits I to XVIII, incl. 423a-462a

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Volume II.

Exhibit No. 2, Final Estimate of Work Done on New Bridge by Contractor, prepared by F. M. Masters (R. p. 90a) 463a

Exhibit No. 3, Estimate of Cost of Reproduction of Bridge, by Lynn B. Curry, Dated Dec. 20, 1930 (R. p. 226a) 465a

Exhibit No. 4, Plotted Curves Showing Estimate of Traffic in Future (R. p. 275a) 466a

Exhibit No. 6, Details of Old Bridge Incorporated in New Structure, by Lynn B. Curry (R. p. 358a) 467a

Exhibit No. 7, Details of Cofferdam, by Lynn B. Curry (R. p. 363a) 468a

Exhibit No. 8, Tabulation of Columbia-Wrightsville Bridge Bids (R. p. 402a) 469a

Exhibit No. 9, Tabulation of Coplay-Northampton Bridge Bids (R. p. 402a) 470a

Exhibit No. 10, Price Trends of Common Labor, 1924 to 1930, incl. (R. p. 405a) 471a

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Exhibit No. 12, Estimate of Cost of Financing by Lynn B. Curry (R. p. 420a) 473a

Exhibit No. 13, Submitted Data re: Coplay-Northampton Bridge, by Lynn B. Curry (R. p. 420a) 474a

Exhibit, Monthly Reports of Traffic and Revenue, March 1930-Feb., 1931 .....476a-484a
Exhibit, Report and Order of the Commission in Former Case (Comp. Dk. No. 6611, R. p. 39a) 485a-506a

Respondent's Exhibits

Exhibit No. 1, Inventory and Appraisal of Bridge Co. by American Appraisal Co. (R. p. 57a 507a-539a
Appendix to Respondent's Exhibit No. 1, Estimated Cost of Cofferdams (R. p. 112a) 540a-548a
Exhibit No. 2, Tabulation of Bids for Clark's Ferry Bridge (R. p. 151a) 549a
Exhibit No. 3, Report of Morris Knowles, Inc., on Survey of Traffic (R. p. 190a) 550a
Exhibit No. 4, Testimony Taken and Exhibits Introduced in Evidence in the Former Case, C. D. No. 6611 (as printed on appeal to Superior Court, No. 17 March Term, 1927), as follows: (R. p. 213a) 596a-793a

Testimony

	Dir.	Cross
E. G. Parsly	596a	598a
L. A. Reinhard	606a	609a
Redirect Examination		618a
F. M. Masters	618a, 631a	690a
R. E. Steward	622a	624a
C. W. Lynch	711a	715a
Wm. Jennings	717a	727a
P. F. Duncan	730a, 773a	745a
R. F. Godfrey	751a	770a

Respondent's Exhibits

Exhibit No. 5, Reproduction Cost New of Present Clark's Ferry Bridge Structure.438a
Exhibit No. 6, Estimate of Cost and Valuation, Dated Sept. 30, 1925 .....439a

Exhibit No. 7, Report by F. M. Masters on Financing, Valuation and Appraisal, Dated Dec. 17, 1923 .....773a
Exhibit No. 9, Report of Main & Co., Dated Sept. 28, 1925, on Examination of Books and Accounts of Bridge Co., Including Balance Sheets, Analysis of Expenditures for Old and New Bridge and Profit and Loss Statements 785a
Exhibit No. 12, Affidavit of E. G. Parsly..792a
Respondent's Exhibit No. 5, Schedule of Tolls Charged by Other Toll Bridges in the U. S. (From Report of J. K. Costello, Gen. Mgr. of Delaware River Bridge Joint Commission, Dated Sept. 19, 1930, R. p. 420a, 421a 793a

COMPLAINANT'S EXHIBIT No. 2

CLARKS FERRY BRIDGE COMPANY

Frank M. Masters, Consulting Engineer, Calder Bldg., Harrisburg, Pa., July 3, 1925

Estimate of Work Done by The Vang Construction Company Under Contract with Clarks Ferry Bridge Company on Construction of New Concrete Bridge

FINAL ESTIMATE

Item		Total Quantities to Date	Unit Price	Total Value to Date
I.	Excavation	2 500 Cu. Yds.	$2.00	$ 5,000.00
II.	Approach Fill	10 616 Cu. Yds.	1.50	15,924.00
III.	Pier Excavation—Loose	2 008 Cu. Yds.	3.00	6,024.00
IV.	Pier Excavation—Rock	300 Cu. Yds.	9.00	2,700.00
V.	Dowels	225 Lin. Ft.	2.00	450.00
VI.	Pier and Abutment Footings Class "A"	2 034 Cu. Yds.	16.00	32,544.00
VII.	Pier and Abutment Shafts Class "B"	3 520 Cu. Yds.	16.00	56,320.00
VIII.	Pier and Abutment Spr. Line Class "A"	1 892 Cu. Yds.	16.00	30,272.00
IX.	Piers Above Spr. Line Class "C"	1 824 Cu. Yds.	16.00	29,184.00
X.	Arch Rings, Walls, Floor Slabs, Etc.	9 496 Cu. Yds.	24.00	227,904.00
XI.	Lamp Standards, Sidewalks, Hand Rail, Etc.	867 Cu. Yds.	26.00	22,542.00
XII.	Approach Concrete	1 174 Sq. Yds.	4.70	5,517.80
		2 097 Sq. Yds.	5.25	11,009.25
XIII.	Waterproofing	10 700 Sq. Ft.	.06	642.00
XIV.	Expansion Joints	3 500 Sq. Ft.	.60	2,100.00
XV.	Zinc Plates	14 950 Lbs.	.25	3,737.50
XVI.	Conduit	3 006 Lin. Ft.	.25	751.50

XVII.	Reinf. Steel Placed	1 079 718 Lbs.	.0475	51,286.60
XVIII.	Cable Fence	420 Lin. Ft.	.60	252.00
XIX.	Drain Inlets	36	75.00	2,700.00
XX.	Cofferdams			30,000.00
	Extra: Allowance for Changing 782 Cu. Yds. of Concrete in North and South Abutments from Class "B" to "A"			
	South Abutment—396 Cu. Yds.			
	North Abutment—386 Cu. Yds.			
	782 Cu. Yds.			
	Cost of Material in 1 Cu. Yd. of Class "A"—$6.87			
	Cost of Material in 1 Cu. Yd. of Class "B"— 6.32			
		$ .55x782		430.10
	Total Amount of Estimate			537,290.75
	Bonus—147 Days @ $150.00			22,050.00
				559,340.75
	Less Previous Estimates			510,427.22
				48,913.53
	Less Bonus Paid			22,050.00
	Amount of This Estimate			$ 26,863.53

I hereby certify that the contractors have completed their work in accordance with the terms of their contract, in a satisfactory manner and the above amount is now due and payable to them as final payment.

(Signed) F. M. Masters, Chief Engineer.

COMPLAINANT'S EXHIBIT No. 3

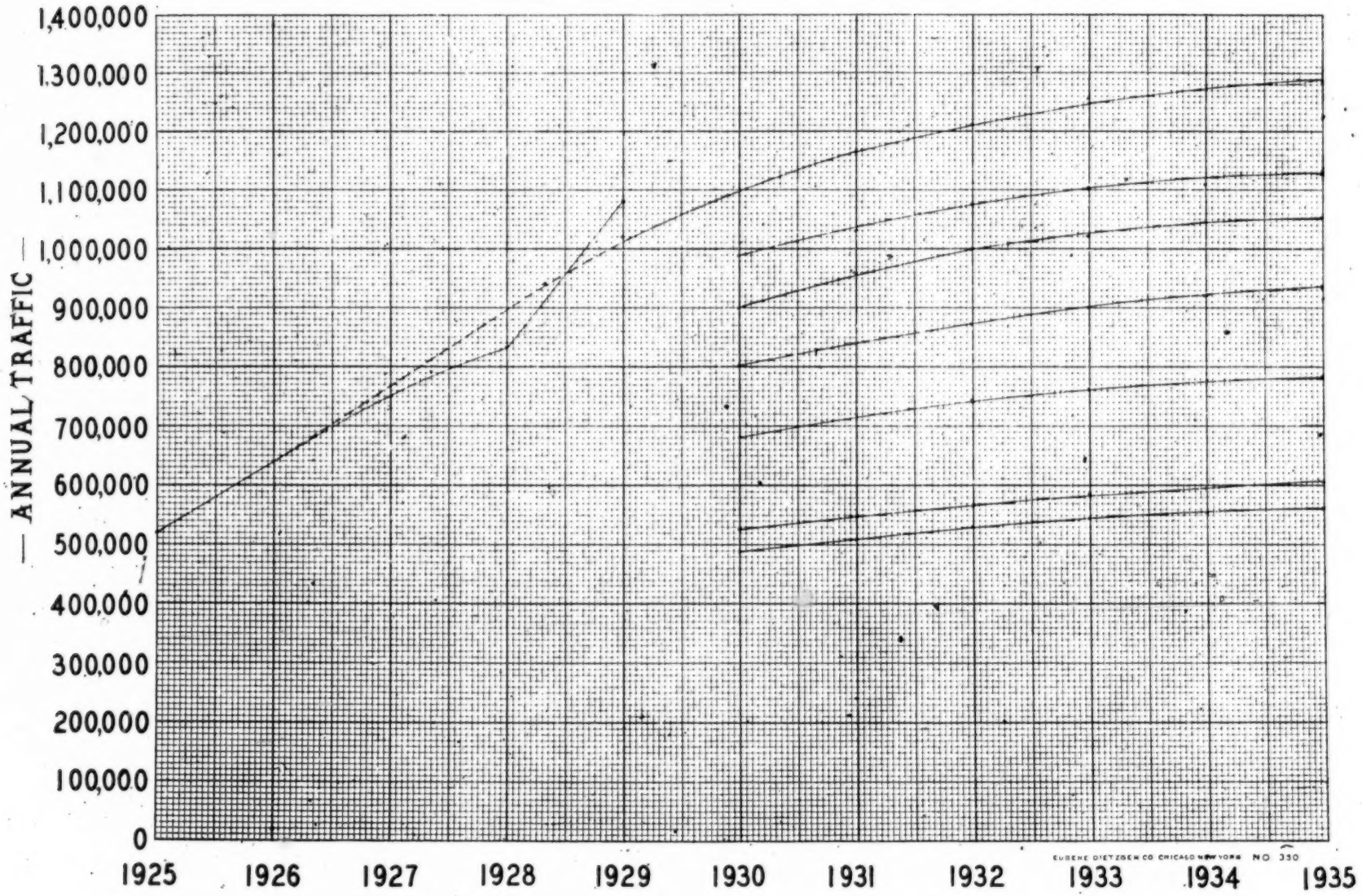
INVENTORY—CLARKS FERRY BRIDGE COMPANY File No. .....

Bureau of Engineering .....Penna. Sheet No.....of.....
Public Service Commission
Commonwealth of Pennsylvania By.....Date..... Acct. No. .....

Reproduction
COST ESTIMATE
By Lynn B. Curry. Date Dec. 20, 1930

Form E. B. 40
Price Basis, Present Day

Item: Summary of Valuation	Life Age Years	Quantity	Unit	Unit Cost	Total Cost	Annuity 4% S. F. Basis	Accrued Annuity May 30, 1931	Total Cost Less Accrued Annuity May 30, 1931
				$	$			
Land—So. Side—(2 parcels) Total of 1.546A					11350	—	—	
No. Side—Main Parcel—Easement-Office Lot—Total 1.871A					8462	—	—	
Total Land—3.417 A.								
Clearing Site—(Bldgs.—$4625.68) (Old Br.—$3836.21)								
1924-1925 Bridge Structure and Equipment								
Item 1—Excav. and backfill at Abuts. and Ret. Walls		2500	c. y.	2.75	6875			
Item 2—Approach Fill		10616	c. y.	2.30	24417			
Item 3—Excav. for Piers		2008	c. y.	4.50	9036			
Item 4—Rock Excav. for Piers		300	c. y.	10.50	3150			
Item 5—Drilling for Dowels		225	L. Ft.	2.00	450			
Item 6—1:2:4 Conc. in Pier and Abut. Footings		2034	c. y.	16.00	32544			
Item 7—1:2-½:5 Conc. from Footings to 1 ft. Below Spring Line		2738	c. y.	15.50	42439			
Item 8—1:2:4 Conc. from 1 ft. Below Spring Line to 6 ft. above Spr. Line		2674	c. y.	16.00	42784			
Item 9—1:3:6 Conc. from 6 ft. above Spring Line to under Road Slab		1824	c. y.	15.00	27360			
Item 10—1:2:4 Conc. Arch Rings, Ret. Walls, Abut. Spandrel Walls, Arch Ring Saddles, Cross Walls, Road Curb and Slab		9496	c. y.	26.00	246896			
Item 11—1:2:4 Conc.-Railings, Lamp Standards, Sidewalks		867	c. y.	28.00	24276			
Item 12—Conc. Paving on approaches and Highways		3271	s. y.	4.90	16028			
Item 13—Waterproofing - Backs of Ret. Walls and Abuts.		10700	s. f.	.08	856			
Item 14—Elastite Expansion Joints		3500	s. f.	.40	1400			
Item 15—Zinc Plates		14950	lbs.	.25	3738			
Item 17—Reinforcing Steel Bars in Concrete		1079718	"	.046	49667			
Item 19—Cast Iron Drain Inlets		36	each	50.00	1800			
Item 20—Coffer Dams and Taking Care of Water			Lump Sum		42000			
Electric Lighting Facilities and Misc. Bridge Appurtenances			Lump Sum		28123			
Old Structural Items of Former Bridge Structure Incorporated in Present Bridge			Lump Sum		35262			
Office Building			Lump Sum		5861			
Sub Total—Non Depreciable $19,812—Depreciable $644,962					664,774			
Engineering					43,000			
Promotion and Organization					8,000			
Administrative, Legal and General Expenses					8,000			
Interest During Construction					22,000			
Cost of Financing					37,500			
Totals—Non Depreciable $27,812—Depreciable $755,462	45-6				$783,274	$6242	$41403	$741,871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— ANNUAL TRAFFIC —
1925
1926
1927
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1929
1930
1931
1932
1933
1934
1935
EUGENE DIETZGEN CO. CHICAGO NEW YORK NO. 330

COMPLAINANT'S EXHIBIT NO. 6

DETAILS

"Old Structural Items of Former Bridge Incorporated in Present Bridge"

This item represents the estimated value remaining in certain parts of the old bridge structure at the time they entered into their present use as a part of the new bridge structure in 1925. It is estimated on the basis of estimated reproduction cost less estimated depreciation at that time (1925), as follows:

2 Abutments 1272 c.y. at $18.50 at 60% Condition	$14,119.20
Retaining Walls 933 c.y. at $16.00 at 50% Condition	7,464.00
Approach Fills (8000 c.y. at $1.50 per c.y.)	12,000.00
Contingencies	1,679.16
	$35,262.36

Note—This amount, together with the allowances for engineering, interest during construction and cost of financing, for the above items, which are allowed elsewhere in Curry's R.C. Est.; plus $10,000 for former Land and Real Estate—make up the figure of $49,100 allowed in the Commission's Report and Order in C-6611, covering all of these.

COMPLAINANT'S EXHIBIT No. 7

DETAILS—ITEM 20—"COFFERDAMS AND TAKING CARE OF WATER."

	Lumber	Clay Fill	Hardware	Labor Carpenter and Common	Maintenance During Use	Pumping Cost	Total per Unit	Number of Units	Total
Abutment Cofferdam—Original Location	$1316.69	$ 235.20	$ 8.90	$492	$210	$200	$2462.79	1	$2462.79
Abutment Cofferdam—Subsequent Location	265.00	235.20	8.90	492	210	200	1411.10	1	1411.10
Abut. Pier Cofferdam—Original Location	1439.60	268.80	9.75	528	228	200	2674.15	2	5348.30
Abut. Pier Cofferdam—Subsequent Location	288.00	268.80	9.75	528	228	200	1522.55	2	3045.10
Inter Pier Cofferdam—Original Location	1113.51	201.60	7.50	396	167	175	2060.61	3	6181.83
Inter Pier Cofferdam—Subsequent Location	203.00	201.60	7.50	396	167	175	1150.10	7	8050.70
Sub-Total	($4625.80	$1411.20	$52.30	$2832	$1201	$1150	$11281.30)		$26499.82

Recapitulation

Lumber	$9798.42
Clayfill	3561.60
Hardware	131.80
Total Materials	$13491.82
Labor—Carpenter & Common	7056.00
Maintenance	3002.00
Pumping Cost	2950.00
	$26499.82

COVERS:- Material - Placing and Moving Labor - Cost of Pumping Operation and Total Maintenance at the Cofferdams	Say	-	$26500.00
Labor - For Unloading, Storage and Handling of Materials and Pumping Equipment from Delivery Point to Original Sites	1.20 per. t. for 2500 t.	-	3000.00
Other Plant Cost: - Covers Use, Depreciation, Maintenance and Operation thereof which is applicable to this Item		-	3500.00
Miscellaneous - (5 Percent)		-	1550.00
Sub-Total		-	$34550.00
10% Contractor's Overhead		-	$3455.00
10% Contractor's Profit		-	$3805.00
Total			$41805.00

NOTE: In 1924, the five (5) lowest bidders bid—1st $30,000 and 2nd 3rd and 4th lowest bids on this item were 2nd $40,000
3rd $40,000 3rd $42,500
2nd $42,500 4th $46,433
5th $46,433
4th $50,500

Average $41,887 Average $42,977

COMPLAINANT'S EXHIBIT No. 8

BRIDGE—PENNSYLVANIA

Commissioners of Lancaster and York Counties, Court House, Lancaster, opened bids Apr. 9, for reinconc. bridge to carry U. S. Route No. 30 over Susquehanna River between Columbia, Lancaster Co., and Wrightsville, York Co. Eleven bids were received, difference between lowest and average, 12 per cnt. Will be 3,734 ft. long, with 38 ft. roadway and one 6 ft. sidewalk. Outstanding feature is relatively small amount of foundation work, due to fact that there is suitable rock at average depth of 4 ft. below surface of water in normal periods. No traffic problem as bridge is being built on new location. Railroad facilities on both sides of river eliminate any long hauls. Width of river, about 5,400 ft., necessitates handling of materials and equipment by means of construction trestle. Relatively short length of time for construction about 21 months, fixed by law. Lowest seven and highest bidders are: (A) Wiley-Maxon Construction Co., Dayton, (awarded contract); (B) Seeds & Derham, Phila.; (C) Folwell Engineering Co., Chicago; (D) H. P. Converse & Co., Boston; (E) J. F. Casey Co., Pittsburgh; (F) Arundel Corporation, Batimore; (G) G. W. Rockwell, Sunbury, Pa.; (H) Whiting-Turner Construction Co., Baltimore. James B. Long, 57-61 Montgomery Trust Arcade, Norristown, Pa., consulting engineer.

	A	B	C	D	E	F	G	H
5,500 cu. yd. unclassified excavation	$2.00	$1.60	$1.25	$1.05	$0.60	$0.70	$4.00	$1.26
8,400 cu. yd. dry excavation	2.00	5 80	1.75	.67	2.85	4.10	3.90	4.50
1,020 cu. yd. wet excavation	4.00	5.50	3.00	.70	5.50	7.00	9.00	13.00
3,700 cu. yd. rock excavation (wet and dry)	5.00	12.00	6.60	4.55	22.00	7.00	12.00	23.20
7,090 cu. yd. 1-6 concrete (footings)	15.00	13.00	14.70	13.92	22.00	11.90	16.50	16.50
36,070 cu. yd. 1-6 concrete (pier shafts and retain walls)	16.00	18.00	15.40	12.82	17.85	13.40	17.50	22.71
6,400 cu. yd. 1-6 concrete (river piers above umbrell)	17.00	15.00	16.80	17.98	20.10	18.50	20.00	21.40
22,100 cu. yd. 1-6 concrete (arch ribs)	24.00	20.50	21.80	35.19	20.10	27.30	23.00	31.15
25,860 cu. yd. 1-6 concrete (floor system)	20.00	20.00	22.20	20.88	20.10	25.30	21.00	27.60
6,400 sq. yd. concrete paving on approaches	3.50	2.70	3.00	3.17	3.30	3.00	3.50	2.80
8,100 sq. ft. concrete sidewalk on approaches	.25	.20	.40	.22	.30	.37	.30	.22
2,300 ft. granite curb and backing	3.00	3.50	4.00	9.23	2.60	4.00	4.60	7.15
4,450 cu. yd. fill on approaches	1.00	.50	1.65	.75	.75	.70	.75	1.00
24,100 sq. yd. asphalt block paving on bridge	2.80	2.75	4.00	3.47	2.75	3.00	3.50	2.93
7,991,000 lb. reinforcing steel (delivered)	.028	.035	.0345	.0333	.03	.035	.03	.03
7,991,000 lb. reinforcing steel (placing)	.012	.0075	.008	.0079	.02	.011	.02	.0137
629,420 lb. structural steel (delivered)	.042	.04	.043	.0525	.044	.055	.0425	.0477
629,420 lb. structural steel (placing)	.018	.01	.013	.0167	.02	.017	.02	.0075
83,500 lb. cast steel (delivered)	.10	.06	.14	.0933	.11	.125	.12	.033
83,500 lb. cast steel (placing)	.02	.01	.013	.01	.05	.29	.03	.023
107,950 lb. cast iron (delivered)	.042	.04	.065	.0675	.05	.07	.06	.043
107,950 lb. cast iron (placing)	.03	.01	.013	.01	.02	.02	.03	.01
58,600 lb. reinforcing mesh in place	.06	.07	.065	.07	.11	.12	.06	.12
9,400 lb. copper flashing	.35	.50	.53	.60	.40	.95	.60	.53
25,000 sq. ft. gunite encasement	.40	.65	.64	.48	.47	.50	.50	.515
12,750 ft. concrete railing	3.00	3.65	6.00	4.15	3.30	5.00	4.00	3.50
6,100 gal. poured asphalt joint filler	.30	.30	.22	.14	.22	.55	.20	.40
51,310 ft. 3 in. fiber conduit	.12	.23	.20	.1445	.12	.20	.25	.185
36,650 ft. 3½ in. fiber conduit	.13	.25	.22	.141	.13	.23	.30	.21
12 drawboxes for fiber conduits	75.00	39.50	66.00	70.00	15.00	35.00	80.00	.34
15,350 ft. 2 in. galv. lighting conduit	.25	.25	.40	.28	.35	.44	.40	.321
8 lanterns (18x36 in.)	90.00	269.00	260.00	231.40	77.00	220.00	250.00	182.00
58 lanterns (24x48 in.)	110.00	190.00	390.00	170.00	165.00	200.00	185.00	180.00
4 bronze bracket with 2 lanterns, pylons	700.00	740.00	660.00	1,035.00	165.00	720.00	760.00	405.00
70 bronze frames and doors for service boxes	10.00	24.00	40.00	58.00	55.00	60.00	25.00	44.70
17 boulevard standards and lanterns	100.00	164.00	195.00	143.00	55.00	165.00	130 00	170.00
4 pylons and bronze collars	500.00	177.00	260.00	154.00	550.00	400.00	400.00	405.00
36,200 sq. ft. waterproofing	.08	.04	.13	.08	.07	.08	.05	.093
898 ft. 18 in. concrete pipe	3.00	3.75	4.00	4.61	7.70	6 75	3.50	7.30
685 ft. 24 in. concrete pipe	4.00	4.40	5.20	4.88	8.80	6.85	4.50	7.00
305 ft. 24 in. concrete pipe (enclosed)	5.00	7.80	10.00	15.48	11.00	86.50	10 00	21 50
220 ft. 4 in. v.c. pipe	50							

36,200 sq. ft. waterproofing	.08	
898 ft. 18 in. concrete pipe	3.00	
685 ft. 24 in. concrete pipe	4.00	
305 ft. 24 in. concrete pipe (enclosed)	5.00	
290 ft. 4 in. v.c. pipe	.50	
3,900 ft. 8 in. v.c. pipe	1.00	
580 ft. 10 in. v.c. pipe	1.20	
9 sewer manholes	100.00	
13 approach inlets	25.00	
390 ft. concrete gutter	1.00	
2 island toll houses (complete)	2.500.00	4
4 sidewalk toll houses (complete)	2.200.00	1
2 bronze name plates	300.00	
Totals	$2,484,000	$2,
*Alternate No. 1—vitrified brick		—
*Alternate No. 2—sheet asphalt	—18,000	—
*Alternate No. 3—sheet concrete		—

Engineering News-Record, Issue of July 4, 1929.

.04	.13	.08	.07	.08	.06	.09
3.75	4.00	4.61	7.70	6 75	3.50	7.30
4.40	5.90	4.88	8.80	6.85	4.50	7.00
7.80	10.00	15.43	11.00	36.50	10.00	21.52
2.20	1.00	.16	.30	.27	.30	.50
2.30	1.30	.36	1.10	.48	.50	.635
2.50	2.00	1.20	3.30	.70	.60	1.60
100.00	110.00	155.00	220.00	140.00	70.00	339.00
50.00	66.00	72.20	55.00	27.00	30.00	116.50
.75	2.00	.56	4.40	2 00	1.25	1.00
4,057.10	5.200.00	3.835.00	3,075.00	2.400.00	3,000.00	3,000.00
1,450.00	5,200.00	1,750.00	2,400.00	2,000.00	2,250.00	2,125.00
600.00	660.00	850.00	500.00	1,400.00	300.00	500.00
$2,538,711	$2,623,031	$2,694,854	$2,712.569	$2,747.758	$2,763.933	$3,291,397
— 1.000	+12,000	+ 1,837	+ 5,000	+ 1.200	— 4.820	.....
— 5,000	—16,800	—15,969	+ 1	—19,000	—24,100	—20,000
— 100	—25,000	—26,554	—24,000	—27,000	—21,100	—20,000

COMPLAINANT'S EXHIBIT No. 9

TABULATION OF BIDS RECEIVED OF COPLAY-NORTHAMPTON BRIDGE BETWEEN LEHIGH AND NORTHAMPTON COUNTIES. CONTRACT SIGNED WE

	Items	Quantities	Unit	Jafolla & Mark, Inc. Philadelphia, Pa. Unit Price	Total	Whittaker & Diehl Co. Harrisburg, Pa. Unit Price	Total	Seeds & Derha Philad lphia, P Unit Price	
	Certified Check	1	$25,000		Yes		Yes		
	Statements	3	P. S. F.		No		Yes		
1.	Clearing, Demolition & Cleanup			Lump Sum	$5,000.	Lump Sum	$1,500.	Lump Sum	$
2.	Dry Earth Excavation	9,974	Cu. Yds.	$2.00	19,948.	$2.00	19,948.	$3.90	
3.	Wet Earth Exacavation	2,307	" "	6.00	13,842.	9.00	20,763.	4.20	
4.	Dry Rock Exacavation	2,184	" "	4.00	8,736.	2.50	5,460.	4.15	
5.	Wet Rock Exacavation	580	" "	6.00	3,480.	10.00	5,800.	4.60	
6.	1:2½:5 Concrete Footings	5,360	" "	10.00	53,600.	12.60	67,536.	11.90	
7.	1:2½:5 Concrete Retaining Walls, Etc.	5,032	" "	14.00	70,448.	16.00	80,512.	13.50	
8.	1:2:4 Concrete Piers, Columns, Etc.	5,531	" "	15.00	82,965.	16.00	88,496.	14.40	
9.	1:2:3 Concrete Arch Ribs & Struts	1,275	" "	30.00	38,250.	25.00	31,875.	24.30	
10.	1:2:3 Concrete Deck with Forms	1,031	" "	28.00	28,868.	22.00	22,682.	20.15	
11.	1:2:3 Concrete Deck without Forms	375	" "	18.00	6,750.	16.00	6,000.	16.20	
12.	1:2:3 Concrete Approach Roadway	1,647	Sq. Yds.	3.00	4,941.	2.50	4,117.50	2.50	
13.	1:2:4 Concrete Curb & Sidewalk of Structure	18,425	Cu. Ft.	.70	12,897.50	.75	13,818.75	.70	
14.	1:2:3 Concrete Railing & Posts	2,400	Lin. Ft.	6.00	14,400.	4.00	9,600.00	3.70	
15.	1:2:4 Concrete Curb, Sidewalk, Etc. Adjacent to Structure	1,005	Cu. Ft.	1.75	1,758.75	.25	251.25	.64	
16.	Extra Portland Cement	500	Bbls.	2.50	1,250.	2.00	1,000.00	2.50	
17.	Extra Reinforcing Steel	50,000	Lbs.	.05	2,500.	.04	2,000.00	.045	
18.	Carborundum Finish	62,600	Sq. Ft.	.06	3,756.	.05	3,130.00	.07	
19.	Precast Gunite Slabs	11,200	" "	.50	5,600.	.30	3,360.00	.35	
20.	Shot in Place Gunite	69.600	" "	.45	31,320.	.32	22,272.00	.37	
21.	Structural Steel	860	Net Tons	Lump Sum	77,352.	Lump Sum	70,520.00	Lump Sum	
22.	Iron Bridge Railing	420	Lin. Ft.	6.00	2,520.	5.00	2,100.00	6.00	
23.	Iron Stair Railing	140	" "	6.00	840.	4.00	560.00	4.50	
24.	Fiber Conduit	5,848	Duct Feet	.25	1,462.	.15	877.20	.15	
25.	2" Gal. Iron Conduit	560	Lin. Ft.	.50	280.	.30	168.00	.40	
26.	3" Gal. Iron Conduit	80	Lin. Ft.	.75	60.00	.50	40.00	.55	
27.	Pull Boxes Cover & Frame Installed	30	Each	25.00	750.00	20.00	600.00	32.00	
28.	Transformer Boxes, Door & Frame	11	"	75.00	825.00	40.00	440.00	65.00	
29.	Single Catch Basins, Walls & Floors	10	"	100.00	1,000.00	35.00	350.00	25.00	
30.	Double Catch Basins, Walls & Floors	4	"	200.00	800.00	75.00	300.00	42.00	
31.	Brick Manholes, cover frame, etc., Complete	5	"	150.00	750.00	200.00	1,000.00	275.00	
32.	Single Catch Basins, Grate & Frame, Installed	21	"	25.00	525.00	20.00	420.00	21.00	
33.	Double Catch Basins, Grate and Frame, Installed	5	"	50.00	250.00	50.00	250.00	40.00	
34.	15" R. Conc. Pipe	175	Lin. Ft.	1.80	315.00	2.00	350.00	1.15	
35.	18" R. Conc. Pipe	150	" "	2.25	337.50	3.00	450.00	1.45	
36.	24" R. Conc. Pipe	51	" "	3.25	165.75	4.00	204.00	2.40	
	[illegible] Pipe	234	" "	5.00	1,170.00	5.00	1,170.00	3.50	
38.	36" R. Conc. Pipe	360	" "	8.00	2,880.00	7.00	2,520.00	4.25	
39.	42" R. Conc. Pipe	33	" "	10.00	330.00	9.00	297.00	6.40	
40.	10" Cast Iron Soil Pipe	520	" "	3.50	1,820.00	2.00	1,040.00	2.80	
41.	Snow Removal Grate	1	Each	500.00	500.00	300.00	300.00	450.00	
42.	Bit. Macadam Roadway	475	Sq. Yds.	2.50	1,187.50	2.50	1,187.50	1.75	
43.	Rip-Rap River & Canal Bank	190	" "	3.00	570.00	1.50	285.00	1.00	
44.	Bronze Name Plates	2	Each	500.00	1,000.00	100.00	200.00	275.00	
	Grand Total				$508,000.00		$495,750.20		$49

COMPLAINANT'S EXHIBIT No. 9

NORTHAMPTON BRIDGE BETWEEN LEHIGH AND NORTHAMPTON COUNTIES. CONTRACT SIGNED WHITTAKER AND DIEHL, SEPT. 11, 1930.

ties	Unit	Jafolla & Mark, Inc. Philadelphia, Pa.		Whittaker & Diehl Co. Harrisburg, Pa.		Seeds & Derham Philadelphia, Pa.		Smith-Fenstermacher Co. Allentown, Pa.	
		Unit Price	Total	Unit Price	Total	Unit Price	Total	Unit Price	Total
	$25,000		Yes		Yes		Yes		Yes
	P. S. F.		No		Yes		Yes		Yes
		Lump Sum	$5,000.	Lump Sum	$1,500.	Lump Sum	$10,000.00	Lump Sum	$2,000.
	Cu. Yds.	$2.00	19,948.	$2.00	19,948.	$3.90	38,898.60	$3.00	29,922.
	" "	6.00	13,842.	9.00	20,763.	4.20	9,689.40	5.00	11,535.
	" "	4.00	8,736.	2.50	5,460.	4.15	9,063.60	5.00	10,920
	" "	6.00	3,480.	10.00	5,800.	4.60	2,668.00	7.00	4,060.
	" "	10.00	53,600.	12.60	67,536.	11.90	63,784.00	12.00	64,320.
	" "	14.00	70,448.	16.00	80,512.	13.50	67,932.00	13.50	67,932.
	" "	15.00	82,965.	16.00	88,496.	14.40	79,646.40	19.00	105,089.
	" "	30.00	38,250.	25.00	31,875.	24.30	30,982.50	24.00	30,600.
	" "	28.00	28,868.	22.00	22,682.	20.15	20,774.65	24.00	24,744.
	" "	18.00	6,750.	16.00	6,000.	16.20	6,075.00	16.00	6,000.
	Sq. Yds.	3.00	4,941.	2.50	4,117.50	2.50	4,117.50	2.70	4,446.90
	Cu. Ft.	.70	12,897.50	.75	13,818.75	.70	12,897.50	1.00	18,425.
	Lin. Ft.	6.00	14,400.	4.00	9,600.00	3.70	8,880.00	4.00	9,600.
	Cu. Ft.	1.75	1,758.75	.25	251.25	.64	643.20	.70	703.50
	Bbls.	2.50	1,250.	2.00	1,000.00	2.50	1,250.00	2.00	1,000.00
	Lbs.	.05	2,500.	.04	2,000.00	.045	2,250.00	.04	2,000.00
	Sq. Ft.	.06	3,756.	.05	3,130.00	.07	4,382.00	.06	3,756.00
	" "	.50	5,600.	.30	3,360.00	.35	3,920.00	.30	3,360.00
	" "	.45	31,320.	.32	22,272.00	.37	25,752.00	.35	24,360.00
	Net Tons	Lump Sum	77,352.	Lump Sum	70,520.00	Lump Sum	78,132.00	Lump Sum	76,540.00
	Lin. Ft.	6.00	2,520.	5.00	2,100.00	6.00	2,520.00	5.50	2,310.00
	" "	6.00	840.	4.00	560.00	4.50	630.00	5.50	770.00
	Duct Feet	.25	1,462.	.15	877.20	.15	877.20	.20	1,169.60
	Lin. Ft.	.50	280.	.30	168.00	.40	224.00	.30	168.00
	Lin. Ft.	.75	60.00	.50	40.00	.55	44.00	.50	40.00
	Each	25.00	750.00	20.00	600.00	32.00	960.00	25.00	750.00
	"	75.00	825.00	40.00	440.00	65.00	715.00	30.00	330.00
	"	100.00	1,000.00	35.00	350.00	25.00	250.00	30.00	300.00
	"	200.00	800.00	75.00	300.00	42.00	168.00	50.00	200.00
	"	150.00	750.00	200.00	1,000.00	275.00	1,375.00	150.00	750.00
	"	25.00	525.00	20.00	420.00	21.00	441.00	24.00	504.00
	"	50.00	250.00	50.00	250.00	40.00	200.00	50.00	250.00
	Lin. Ft.	1.80	315.00	2.00	350.00	1.15	201.25	1.35	236.25
	" "	2.25	337.50	3.00	450.00	1.45	217.50	1.70	255.00
	" "	3.25	165.75	4.00	204.00	2.40	122.40	2.75	140.25
	" "	5.00	1,170.00	5.00	1,170.00	3.50	819.00	3.75	877.50
	" "	8.00	2,880.00	7.00	2,520.00	4.25	1,530.00	4.75	1,710.00
	" "	10.00	330.00	9.00	297.00	6.40	211.20	7.00	231.00
	" "	3.50	1,820.00	2.00	1,040.00	2.80	1,456.00	2.00	1,040.00
	Each	500.00	500.00	300.00	300.00	450.00	450.00	400.00	400.00
	Sq. Yds.	2.50	1,187.50	2.50	1,187.50	1.75	831.25	1.70	807.50
	" "	3.00	570.00	1.50	285.00	1.00	190.00	2.00	380.00
	Each	500.00	1,000.00	100.00	200.00	275.00	550.00	75.00	150.00
			$508,000.00		$495,750.20		$496,721.15		$515,082.50

COMPLAINANT'S EXHIBIT No. 10

(SHEET 2) PRICE TRENDS—COMMON LABOR—(LOCAL)—1924 to 1930 INCLUS

	1924	1925	1926	1927	1928	
Common Labor Rate cts. per hour Average—from Pa. Dept. of Highways'—Cost Engrs.						
Monthly Summary						
Dauphin Co., Pa.	45-40 (d)	40	40	40	35 (e)	3
Perry Co., Pa.		32.5	32.5	40-35	35-30	35-3
Cumberland Co., Pa.			32.5-40	40	35-32.5	35-3
Note: (d)=some 35 & 50; (e)=some 40.						
Pa. Department of Highways						
1—Dauphin County:—						
(a) (From Completion Reports)						
Stucker Bros. Appl. 2025 (Began 6-23)	50					
Londonderry & Derry Twps.	(1-9) 45-40					
Pyramid Const. Co. R-139—Paxtang	(8-10) 35					
Continental Contr. Co. App.-692—E. Hanover Twp.		(5-10) 45				
Frey Const. Co. R-140—L. Paxton & W. Hanover Twps.		(6-10) 40				
Swanger & White App. 3855—E. Hanover Twp.			(5-8) 40			
Wm. H. Murphy R-140—E. Hanover and W. Hanover Twps.			(4-10) 40			
Swanger & Fackler R-129—Steelton			(5-9) 40			
Lincoln Const. Co. R-339—Mifflin & Lykens Twps.			(9-12) 35-40			
Lincoln Const. Co. R-339—Gratz-Lykens			(11-26) 35-40	(9-27) 40-35		
Continental Contr. Co. R-1—Middle Paxton Twp.				(3-11) 40		
J. C. Shawfield R-1 Sec. 1-2A—Susquehanna Twp.				(8-12) 40		
Continental Contr. C R-140—Penbrook				(8-12) 40		
Continental Contr. Co. R-370—Penbrook				(9-12) 40-35		
W. Grant Raub R-140—E. Hanover Twp.				(10-27) 40	(7-28) 35	
Swanger & White R-1—Upper Paxton Twp.				(12-27) 40	(5-28) 35	
Jas. Nicholson R-1—Susquehanna Twp.					(4-10) 35	
H. A. Kline R-617—Susquehanna Twp. (grading job)					(3-28) 35	(9-29) 35
Swanger & White R-139—Hershey						(6-11) 35
(b) (From Monthly Reports)						
L. M. Hutchinson R-129—Middletown to Elizabethtown						
Ira J. Reighter Appl. 6600 Jackson Twp.						
(c) (From Inspectors Reports)—(Dauphin County)						
2—Perry County:—						
(a) (From Completion Reports)						
Union Paving Co. R-31 Sec. 1—Greenwood & Howe Twpe	(8-24) 30	(9-25) 30-35				
Swanger & White R-31 Sec. 2—Center & Oliver Twps.		(4-9) 32.5-35				
Ancon Const. Co. R-40 Sec. 2—Carroll Twp.			(4-10) 32.5-35			
J. M. Hutchinson R-122—Madison Twp. (grading job)			(7-26) 30	(7-27) 25		
Lord Const. Co. R-31 Walker and Delaware Twps.				(7-27 40-35	(8-28) 35-30	
John S. Teeter R-30—Penn Twp.						(8-9) 35-3
Martin & Frownfelter R-293—Greenwood Twp.						(9-12) 3
(b) (From Monthly Reports)						
J. C. Shawfield R-191 Saville & Tuscarora Twps. (grading job)						(12-29) 3
John H. Wickersham R-30—Penn Twp. & Duncannon						
Martin & Frownfetler Appl. 6570—Rye Twp.						
(c) (From Inspectors Reports) (Perry County)						
3—Cumberland County:—						
(a) (From Completion Reports)						
P. R. Hostetter R-250—New Cumberland		(10-25) 40	(7-26) 40			
P. R. Hostetter R-250—Lemoyne			(9-10) 40			
Tri State Engrg. Co. R-40 Sec. 1—N. Middleton Twp.			(4-10) 32.5			
F. D. Kessler R-34—Middlesex Twp.					(4-11) 35	
Diehl Henneberger Wishard Appl. 5749—Upper Frankford Twp.						(3-8) 3
(b) (From Monthly Reports)						
(c) (From Inspectors Reports) (Cumberland County)						

COMPLAINANT'S EXHIBIT NO. 10

2) PRICE TRENDS—COMMON LABOR—(LOCAL)—1924 to 1930 INCLUSIVE

1924	1925	1926	1927	1928	1929	Sept. 1 1929	July 1930	Sept. 1930	Oct. 1930	Nov. 1930	Dec. 1930	1930.
45-40 (d)	40	40	40	35 (e)	35	35	35	35	35	35	30	35-30
	32.5	32.5	40-35	35-30	35-30	35-30	35-30	35-36	35-30	30	30	35-30
		32.5-40	40	35-32.5	35-30			35	35	35	30	35
50												
(1-9) 45-40												
(8-10) 35												
	(5-10) 45											
	(6-10) 40											
		(5-8) 40										
		(4-10) 40										
		(5-9) 40										
		(9-12) 35-40										
		(11-26) 35-40	(9-27) 40-35									
			(3-11) 40									
			(8-12) 40									
			(8-12) 40									
			(9-12) 40-35									
			(10-27) 40	(7-28) 35								
			(12-27) 40	(5-28) 35								
				(4-10) 35								
				(3-28) 35	(9-29) 35							
					(6-11) 35							
						35						(3-6) 35-30
							35					(1-7) 35
								35	25-35			
(8-24) 30	(9-25) 30-35											
	(4-9) 32.5-35											
		(4-10) 32.5-35										
		(7-26) 30	(7-27) 25									
			(7-27 40-35	(8-28) 35-30								
					(8-9) 35-30	35-30						
					(9-12) 30	30						
					(12-29) 30		30					(1-7) 30
							30	30	30	30		(1-7) 30
								35	35			(9-10) 35
							30	30	35-30			(7-10) 35-30
	(10-25) 40	(7-26) 40										
		(9-10) 40										
		(4-10) 32.5										
				(4-11) 35								
					(3-8) 30							
												(8-10) 35-30-25

COMPLAINANT'S EXHIBIT No. 11

(SHEET 1) PRICE TRENDS—CERTAIN MATERIALS—1924 TO 1930 INCLUSIVE

		1924	1925	1926	1927	1928	1929	1930	Sept. 1 1929	Ju 19
From Engineering News-Record										
1 BARS—Reinforcing—¾" billet steel—$ per 100 lbs. mill lots—stock length F.O.B.—Mills—Pgh.	High	2.40	2.20	2.00	2.00	2.00	2.05	2.00		
	Low	2.00	1.90	1.90	1.80	1.80	2.00	1.60		
	Aver.	2.22	2.03	1.98	1.85	1.92	2.02	1.81	2.05	(7-3 (8-7
2 CEMENT—Portland—C. I.—to contractors $ per Bbl. of 4 bags excl. of chg. for bags (a)=F.O.B.—Phila.; (b) Delv.—Phila.; (Delv. adds $.20 per bbl.)	High	2.41	2.41	2.60	2.50	2.40	2 40	2.10		
	Low	2.41	2.41	2.41	2.40	2.40	2.10	2.10		
	Aver.	2.41 (a)	2.41 (a)	2.44 (a)	2.44 (a)	2.40 (a)	2.33 (b)	2.10 (b)	2.40 (b)	
3 CRUSHED STONE—¾" C. I.—$ (a) per c. y. F.O.B.—Phila.; (b) per c. y. Delv. job Phila.; (c) per ton—F.O.B. Phila.; (d) per ton Delv. job Phila.; (Delv. adds $.60 per ton) (1½ tons per c. y.)	High	2.15	2.10	2.10	2.25	2.25	2.73	2.73		
	Low	2.10	2.10	2.10	2.25	2.25	2.73	2.73		
	Aver.	2.11 (a)	2.10 (a)	2.10 (a)	2.25 (b)	2.25 (c)	2.73 (d)	2.73 (d)	2.73 (d)	
4 SAND—(a) $ per C. Y.—F.O.B. Phila.; (b) $ per ton Delv. job Phila. (Delv. adds $.85 per ton)	High	1.65	1.50	1.50	1.65	1.91	1.91	1.91		
	Low	1.50	1.50	1.50	1.65	1.91	1.91	1.91		
	Aver.	1.52 (a)	1.50 (a)	1.50 (a)	1.65 (a)	1.91 (b)	1.91 (b)	1.91 (b)	1.91 (b)	
5 LUMBER—Long leaf Y P—$ per M 3x12 to 12x12 20′ long and under; (a) C. L. F.O.B.—Phila.; (b) C. L. Delv. job Phila. (Delv. adds nothing in Phila.)	High	68.	68.50	65.	65.	60.	62.	60.		
	Low	51.	62.	65.	60.	60.	55.	60.		
	Aver.	57.33 (a)	65.71 (a)	65. (a)	62.67 (a)	60. (a)	58.75 (b)	60. (b)	62. (b)	
6 ENG. N-R CONSTRUCTION COST INDEX Base—1913=100		215.36	206.68	208.03	206.24	206.78	207.02	202.85	207.57	
From Engineering News-Record and U. S. Department of Commerce										
1 AMERICAN APPRAISAL CO. COST INDEX Reinforced Concrete. Base—1913=100. Middle Atlantic States, Pittsburgh District U. S. Average.		208.5	204.2	205.2	207.6	208.2	209.5	203.3	210.3	
		219.7	210.7	213.2	211.0	210.6	211.5	204.0	212.5	
		205.8	199.9	200.8	200.0	200.3	201.0	195.8	201.0	
From Iron Age										
1 SOFT STEEL BARS— cts. per lb.—	Jan.	2.40	2.10	2.00	1.98	1.81	1.90	1.89		
	Feb.	2.40	2.00	2.00	1.90	1.85	1.90	1.85		
	Mar.	2.40	2.10	2.00	1.90	1.85	1.90	1.85		
	Apr.	2.29	2.05	2.00	1.89	1.85	1.95	1.79		
	May	2.24	2.00	1.95	1.85	1.85	1.95	1.75		
	June	2.20	2.00	2.00	1.81	1.85	1.95	1.73		
	July	2.15	2.00	2.00	1.80	1.85	1.95	1.65		
	Aug.	2.13	1.95	2.00	1.80	1.90	1.95	1.64		
	Sept.	2.04	1.92	2.00	1.78	1.90	1.94	1.61	1.94	
	Oct.	2.00	2.00	2.00	1.75	1.91	1.90	1.60		
	Nov.	2.03	2.00	2.00	1.77	1.94	1.90	1.60		
	Dec.	2.10	2.00	2.00	1.18	1.90	1.90	1.60		
	Aver.	2.20	2.02	2.00	1.84	1.87	1.92	1.69		

COMPLAINANT'S EXHIBIT No. 11

(SHEET 1) PRICE TRENDS—CERTAIN MATERIALS—1924 TO 1930 INCLUSIVE

	1924	1925	1926	1927	1928	1929	1930	Sept. 1 1929	July 1930	Sept. 1930	Oct. 1930	Nov. 1930	Dec. 1930
High	2.40	2.20	2.00	2.00	2.00	2.05	2.00						
Low	2.00	1.90	1.90	1.80	1.80	2.00	1.60						
Aver.	2.22	2.03	1.98	1.85	1.92	2.02	1.81	2.05	(7-3) 1.75 (8-7) 1.60	1.70	1.70	1.70	1.70
High	2.41	2.41	2.60	2.50	2.40	2 40	2.10						
Low	2.41	2.41	2.41	2.40	2.40	2.10	2.10						
Aver.	2.41	2.41	2.44	2.44	2.40	2.33	2.10	2.40	2.10	2.10	2.10	2.10	2.10
	(a)	(a)	(a)	(a)	(a)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)
High	2.15	2.10	2.10	2.25	2.25	2.73	2.73						
Low	2.10	2.10	2.10	2.25	2.25	2.73	2.73						
Aver.	2.11	2.10	2.10	2.25	2.25	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73
	(a)	(a)	(a)	(b)	(c)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
High	1.65	1.50	1.50	1.65	1.91	1.91	1.91						
Low	1.50	1.50	1.50	1.65	1.91	1.91	1.91						
Aver.	1.52	1.50	1.50	1.65	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91
	(a)	(a)	(a)	(a)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)
High	68.	68.50	65.	65.	60.	62.	60.						
Low	51.	62.	65.	60.	60.	55.	60.						
Aver.	57.33	65.71	65.	62.67	60.	58.75	60.	62.	60.	60.	60.	60.	60.
	(a)	(a)	(a)	(a)	(a)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)
	215.36	206.68	208.03	206.24	206.78	207.02	202.85	207.57	200.95	199.58	198.72	198.54	196.86
	208.5	204.2	205.2	207.6	208.2	209.5	203.3	210.3	206.3	197.3	195.0	188.7	188.7
	219.7	210.7	213.2	211.0	210.6	211.5	204.0	212.5	204.8	199.3	197.5	192.5	192.5
	205.8	199.9	200.8	200.0	200.3	201.0	195.8	201.0	197.0	193.0	190.1	185.0	184.4
Jan.	2.40	2.10	2.00	1.98	1.81	1.90	1.89						
Feb.	2.40	2.00	2.00	1.90	1.85	1.90	1.85						
Mar.	2.40	2.10	2.00	1.90	1.85	1.90	1.85						
Apr.	2.29	2.05	2.00	1.89	1.85	1.95	1.79						
May	2.24	2.00	1.95	1.85	1.85	1.95	1.75						
June	2.20	2.00	2.00	1.81	1.85	1.95	1.73						
July	2.15	2.00	2.00	1.80	1.85	1.95	1.65						
Aug.	2.13	1.95	2.00	1.80	1.90	1.95	1.64		1.65				
Sept.	2.04	1.92	2.00	1.78	1.90	1.94	1.61	1.94		1.61			
Oct.	2.00	2.00	2.00	1.75	1.91	1.90	1.60				1.60		
Nov.	2.03	2.00	2.00	1.77	1.94	1.90	1.60					1.60	
Dec.	2.10	2.00	2.00	1.18	1.90	1.90	1.60						1.60
Aver.	2.20	2.02	2.00	1.84	1.87	1.92	1.69						

COMPLAINANT'S EXHIBIT NO. 12

DETAILS OF AN INDEPENDENT ESTIMATE

By L. B. Curry

Cost of Financing

for Reproduction Cost as of December, 1930

In RE:—P. S. C. Pa. vs. Clarks Ferry Bridge Company C—8219.

(Note—This was requested by Attorney for Respondent—See Testimony Page 400 [420a.]

Legal Services	$ 3,000.00
Other Professional Services	200.00
Printing—Stocks, Bonds, Mortgage, etc.	800.00
Filing Fees, Stamps, etc.	500.00
Capital Stock Bonus	650.00
Banker and Trustee Services	850.00
Brokerage, Commissions and (or) Other Sales Expenses to put out $625,000 of Pfd. Stock and Bonds at 4½% plus $375	28,500.00
Miscellaneous Expenses—Advertising, Traveling Expenses, etc.	500.00
Total	$35,000.00

Respectfully submitted,

Lynn B. Curry.

Harrisburg, Penna., April 9th, 1931.

COMPLAINANT'S EXHIBIT NO. 13

In re:
The Public Service Commission of
The Commonwealth of Pennsylvania

vs.

Clarks Ferry Bridge Company
C. 8219

At the hearing in the above entitled proceeding on February 25 and 26, 1931, request was made by attorney for respondent that Engineer L. B. Curry, witness called by the complainant, submit for the record in the case answers to the following questions regarding the Coplay-Northampton Bridge:

1. What is the length of the bridge?
2. What is the width of the Lehigh River at the bridge?
3. What is the depth of the Lehigh River at this point at mean water level?
4. How many piers has the bridge?
5. How many of the piers are on land?
6. How many piers are in water?

In response to the above questions I have obtained the following answers from data taken by me from the approved general plan of the Coplay-Northampton Bridge in the Commission's file of the record in Complaint Docket 4704:

1. The length of the bridge is 1122 feet, face to face of end abutments. There are walled approaches on each end and their total length is about 342 feet.

2. The width of the Lehigh River along the center line of the bridge is about 320 feet at normal water level. The maximum high water level is about 560 feet.

3. The depth of the river at normal water level at various places ranges from 5 to 8 feet; at maximum high water level the depth ranges from 23 to 27 feet in the main channel.

4. The bridge has six piers between and exclusive of the two end abutments.

5. At normal water level three of the piers are on land. However, for all of the piers, their foundations were in wet excavation.

6. At normal water level one pier is in midstream and two piers are at the water edge. At maximum high water four piers would stand in the water.

Respectfully submitted,

LYNN B. CURRY.

Harrisburg, Pennsylvania, March 12, 1931.

MONTHLY REPORTS OF TRAFFIC AND REVENUE OF CLARKS FERRY BRIDGE COMPANY FOR THE MONTHS OF MARCH, 1930 TO FEBRUARY, 1931, INCLUSIVE.

MARCH, 1930

64,857	Automobiles, at 10c	$ 6,485.70
2,171	A to K Trucks at 10c	217.10
1,314	L to N Trucks, at 20c	262.80
907	P & R Trucks, at 30c	272.10
673	S & U Trucks, at 60c	403.80
8	A Busses, at 10c	.80
18	B Busses, at 20c	3.60
402	C Busses, at 30c	120.60
8	Horses and Wagons	.60
158	Motorcycles, at 5c	7.90
102	Trailers	13.80
29	Autos monthly, at 4.00	116.00
2	A to K monthly, at 4.00	8.00
3	L to N monthly, at 7.50	22.50
3	P & R monthly, at 10.00	30.00
2	S & U monthly, at 20.00	40.00
	Total	$ 8,005.30

APRIL, 1930

76,871	Automobiles, at 10c	$ 7,687.10
2,437	A to K Trucks, at 10c	243.70
1,336	L to N Trucks, at 20c	267.20
977	P & R Trucks, at 30c	293.10

484	S & U Trucks, at 60c	290.40
21	A Busses, at 10c	2.10
25	B Busses, at 20c	5.00
457	C Busses, at 30c	137.10
3	D Busses, at 60c	1.80
12	Horse and Wagons	1.10
266	Motorcycles, at 5c	13.30
158	Trailers	25.10
1	Trailer monthly	10.00
32	Autos Monthly, at 4.00	128.00
5	A to K Monthly, at 4.00	20.00
3	L to N Monthly, at 7.50	22.50
2	P & R Monthly, at 10.00	20.00
2	S & U Monthly, at 20.00	40.00
1	Road Roller	3.00
1	Tractor	1.13
	Total	$ 9,211.63

MAY, 1930

91,988	Automobiles, at 10c	$ 9,198.80
2,616	A to K Trucks, at 10c	261.60
1,434	L to N Trucks, at 20c	286.80
1,031	P & R Trucks, at 30c	309.30
573	S & U Trucks, at 60c	343.80
20	A Busses, at 10c	2.00
95	B Busses, at 20c	19.00
507	C Busses, at 30c	152.10
	D Busses, at 60c	
10	Horse and Wagons	.80
289	Motorcycles, at 5c	14.45
150	Trailers	23.60

1	Trailer Monthly	10.00
38	Autos Monthly, at 4.00	152.00
6	A to K Monthly, at 4.00	24.00
2	L to N Monthly, at 7.50	15.00
2	P & R Monthly, at 10.00	20.00
2	S & U Monthly, at 20.00	40.00
	Tractors and Engine	6.38
2	Hogs, at .01	.02
	Total	$10,879.65

JUNE, 1930

106,244	Automobiles, at 10c	$10,624.40
2,641	A to K Trucks, at 10c	264.10
1,403	L to N Trucks, at 20c	280.60
1,094	P & R Trucks, at 30c	328.20
474	S & U Trucks, at 60c	284.40
37	A Busses, at 10c	3.70
79	B Busses, at 20c	15.80
573	C Busses, at 30c	171.90
1	D Busses	.60
13	Horses and Wagons	1.15
576	Motorcycles	28.70
181	Trailers	30.13
43	Autos Monthly, at 4.00	172.00
4	A to K Monthly, at 4.00	16.00
2	L to N Monthly, at 7.50	15.00
2	P & R Monthly, at 10.00	20.00
1	Tractor Truck	.75
1	Well Drill	2.50
1	Push Cart	.05
	Total	$12,259.98

JULY, 1930

124,331	Automobiles, at 10c	$12,433.10
2,583	A to K Trucks, at 10c	258.30
1,508	L to N Trucks, at 20c	301.60
1,114	P & R Trucks, at 30c	334.20
573	S & U Trucks, at 60c	343.80
11	A Busses, at 10c	1.10
50	B Busses, at 20c	10.00
750	C Busses, at 30c	225.00
3	D Busses, at 60c	1.80
15	Horse and Wagons	1.15
428	Motorcycles, at 5c	21.40
203	Trailers	25.40
40	Autos Monthly, at 4.00	160.00
4	A to K Monthly, at 4.00	16.00
5	L to N Monthly, at 7.50	37.50
1	P & R Monthly	10.00
3	S & U Monthly, at 20.00	60.00
2	Trailers, at 10.00	20.00
1	Tractor Engine and Roller	4.50
1	Road Roller	3.00
	Total	$14,267.85

AUGUST, 1930

156,709	Automobiles, at 10c	$15,670.90
3,747	A to K Trucks, at 10c	374.70
1,934	L to N Trucks, at 20c	386.80
1,454	P & R Trucks, at 30c	436.20
662	S & U Trucks, at 60c	397.20
51	A Busses, at 10c	5.10
77	B Busses, at 20c	15.40

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922	C Busses, at 30c	276.60
2	D Busses, at 60c	1.20
6	Horse and Wagons	.55
522	Motorcycles	26.10
323	Trailers	45.05
35	Autos Monthly, at 4.00	140.00
7	A to K Trucks Monthly, at 4.00	28.00
4	L to N Trucks Monthly, at 7.50	30.00
2	P & R Trucks Monthly, at 10.00	20.00
1	S & U Truck Monthly, at 20.00	20.00
1	Trailer Monthly, at 10.00	10.00
	Total	$17,883.80

SEPTEMBER, 1930

120,247	Automobiles, at 10c	$12,024.70
3,437	A to K Trucks, at 10c	343.70
2,064	L to N Trucks, at 20c	412.80
1,519	P & R Trucks, at 30c	455.70
648	S & U Trucks, at 60c	388.80
22	A Busses, at 10c	2.20
49	B Busses, at 20c	9.80
832	C Busses, at 30c	249.60
2	D Busses, at 60c	1.20
4	Horse and Wagons	.25
377	Motorcycles, at 5c	18.85
344	Trailers	50.82
42	Autos Monthly, at 4.00	168.00
4	A to K Monthly, at 4.00	16.00
8	L to N Monthly, at 7.50	60.00
2	P & R Monthly, at 10.00	20.00
1	S & U Monthly, at 20.00	20.00

1	Trailer Monthly	10.00
3	Road Rollers, at 3.00	9.00
	Total	$14,261.42

OCTOBER, 1930

103,773	Automobiles, at 10c	$10,377.30
3,183	A to K Trucks, at 10c	318.30
1,902	L to N Trucks, at 20c	380.40
1,670	P & R Trucks, at 30c	501.00
729	S & U Trucks, at 60c	437.40
33	A Busses, at 10c	3.30
18	B Busses, at 20c	3.60
752	C Busses, at 30c	225.60
8	Horse and Wagons	.60
472	Motorcycles, at 5c	23.60
441	Tailers	65.60
37	Autos Monthly, at 4.00	148.00
4	A to K Monthly, at 4.00	16.00
8	L to N Monthly, at 7.50	60.00
1	P & R Monthly, at 10.00	10.00
2	S & U Monthly, at 20.00	40.00
1	Road Roller	3.00
1	Well Drill	2.50
	Total	$12,616.20

NOVEMBER, 1930

94,050	Automobiles, at 10c	$ 9,405.00
2,688	A to K Trucks, at 10c	266.80
599	L to N Trucks, at 20c	119.80
814	L to N Trucks, at 15c	122.10
640	P & R Trucks, at 30c	192.00

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647	P & R Trucks, at 20c	129.40
293	S & U Trucks, at 60c	175.80
309	S & U Trucks, at 35c	108.15
32	ZZ Trucks, at 50c	16.00
9	A Busses, at 10c	.90
3	B Busses, at 15c	.45
3	B Busses, at 20c	.60
278	C Busses, at 30c	83.40
360	C Busses, at 25c	90.00
	Horse and Wagons	.60
141	Motorcycles, at 5c	7.05
306	Trailers	54.07
3	Road Rollers, at 3.00	9.00
36	Autos Monthly, at 4.00	144.00
6	A to K Monthly, at 4.00	24.00
1	L to N Monthly, at 6.00	6.00
5	L to N Monthly, at 7.50	37.50
2	S & U Monthly, at 20.00	40.00
	Miscellaneous	2.45
	Total	$11,035.07

DECEMBER, 1930

72,690	Automobiles, at 10c	$ 7,269.00
2,861	A to K Trucks, at 10c	286.10
1,572	L to N Trucks, at 15c	235.80
1,107	P & R Trucks, at 20c	221.40
543	S & U Trucks, at 35c	190.05
56	Z Z Trucks, at 50c	28.00
4	A Busses, at 10c	.40
4	B Busses, at 15c	.60
687	C Busses, at 25c	171.75

6	Horses and Wagons	.50
71	Motorcycles, at 5c	3.55
291	Trailers	33.21
36	Autos Monthly, at 4.00	144.00
4	A to K Monthly, at 4.00	16.00
5	L to N Monthly, at 6.00	30.00
1	P & R Monthly, at 7.50	7.50
2	S & U Monthly, at 12.50	25.00
	Total	$ 8,662.86

JANUARY, 1931

64,669	Automobiles, at 10c	$ 6,466.90
2,659	A to K Trucks, at 10c	265.90
1,505	L to N Trucks, at 15c	225.75
1,143	P & R Trucks, at 20c	238.60
746	S & U Trucks, at 35c	261.10
72	Z Z Trucks, at 50c	36.00
16	Motor Busses, at 10c	1.60
11	B Busses, at 15c	1.65
630	C Busses, at 25c	157.50
10	Horses, etc., at 5c	.50
71	Motorcycles	3.70
370	Trailers	42.69
30	Autos Monthly, at 4.00	120.00
5	R & S Trucks, at 4.00	20.00
5	T & U Trucks, at 6.00	30.00
1	V Trucks	7.50
3	Y & Z Trucks, at 12.50	37.50
1	Tractor Engine	3.00
	Total	$ 7,909.89

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FEBRUARY, 1931

52,833	Automobiles, at 10c	$ 5,283.30
2,295	A to K Trucks, at 10c	229.50
1,361	L to N Trucks, at 15c	204.15
1,152	P & R Trucks, at 20c	230.40
674	S & U Trucks, at 35c	235.90
64	Z Z Trucks, at 50c	32.00
3	A Busses, at 10c	.30
3	B Busses, at 15c	.45
473	C Busses, at 25c	118.25
6	Horses and Wagons	.35
72	Motorcycles, at 5c	3.60
463	Trailers	54.31
27	Autos Monthly, at 4.00	108.00
6	R & S Monthly, at 4.00	24.00
5	T & U Monthly, at 6.00	30.00
1	V & W Monthly	7.50
3	Y & Z Monthly, at 12.50	37.50
	Total	$ 6,599.51

REPORT AND ORDER OF THE PUBLIC SERVICE COMMISSION IN THE FORMER RATE CASE.

Complaint Docket 6611

(On Appeal in the Superior Court, No. 17, March Term, 1927.)

BY THE COMMISSION:

On August 11, 1925, a complaint was filed with the Commission, alleging that the rates of Clark's Ferry Bridge Company, respondent, in these proceedings, as contained in Tariff P. S. C. Pa. No. 2, are "unfair, exorbitant, and entirely out of proportion to the service rendered, and impose an unnecessary hardship on those who use the State improved highway." Respondent, in its answer, denied that the rates therein set forth were unfair or exorbitant, and alleged that the said rates are "not in excess of those required to produce a revenue sufficient to pay all operating expenses, fixed charges, provide for depreciation and obsolescence and for a fair return to the respondent upon the value of its property used and useful in the public service."

Since this complaint is directed against respondent's Tariff P. S. C. Pa. No. 2, issued April 30, 1925, and effective May 30, 1925, and was filed subsequent to the thirty-day period allowed by law, the burden of proof rested upon the complainants.

In the presentation of their case, the complainants confined themselves to comparative studies of the rates of other bridge companies, motor vehicle registration in Pennsylvania, traffic-census studies, and the resultant estimates of the probable future earnings of the respondent. The respondent, however, desiring to have the value of its property fixed for rate-making purposes, submitted evidence with regard to the value of its property, its revenues, and expenses.

The first Clark's Ferry Bridge, which spanned the Susquehanna River from southeast to northwest, at a point approximately fourteen miles north of Harrisburg, was constructed in the early part of the last century. The old bridge was a covered wooden structure of combination truss and arch construction and was originally built to carry two-way traffic, but subsequent to respondent's inception it was necessary to restrict it to one-way traffic. It was designed, not only to accommodate persons and vehicles using the public highway, but also to carry a sort of towpath on the downstream side, by means of which canal boats could be drawn from one side of the river to the other. The original bridge was begun in 1828 and finished in 1829. In 1837-38, the bridge was partially destroyed by flood and ice; in 1846, it suffered similar damage; and in March 1859, it was considerably damaged by windstorm.

An improved State Highway (Route No. 1) leads from Harrisburg to the southern end of the bridge and continues on the east side of the river to Millers-

burg. On the opposite side of the river, another improved highway (Route No. 195) leads northward from the bridge through Liverpool to Sunbury. Branching off this route to the left, at Amity Hall, about two miles north of the bridge, a new road (Route No. 275), now under construction, follows the Juniata River to Newport and Millerstown. From Liverpool, another improved highway (Route No. 293) leads through Millerstown, Lewistown, and Bellefonte to western Pennsylvania, running south from the western end of the bridge, a State Highway leads to Duncannon; and from this point another highway (Route No. 30) branches westward to New Bloomfield and southward along the Susquehanna River through Marysville and Enola to Wormleysburg, which lies directly across the river from Harrisburg. A State Highway, which is now under construction, runs from Newport, through New Bloomfield, to Carlisle and Gettysburg. Respondent contends that the latter highway when completed will provide a route almost due south from Newport to Gettysburg, which will shorten by twenty-six miles the distance for tourists coming east over the William Penn Highway to Gettysburg, Baltimore, and Washington.

On April 7, 1915 certain properties of the Pennsylvania Canal Company were sold at foreclosure sale for a consideration of $5,600 ($4,500 for bridge structure and $1,100 for canal land). The purchasers incorporated the respondent on August 23, 1915, and about a month later (September 30, 1915) the respondent company bought the bridge property

from the purchasers for a consideration of $45,000, which was paid in the following manner: $3,000 in cash, $20,000 in 6% First Mortgage Bonds, and $22,000 in common stock of the company.

The old bridge acquired by respondent in 1915 was in a bad state of repair, and shortly after its incorporation respondent began to make extensive repairs, renewals, and replacements. For this purpose, the bonded indebtedness was increased from $20,000 to $30,000 in 1917 and to $50,000 in 1918. The actual original cost of the old bridge could not be determined but respondent's engineer estimated the original cost, as of December 1923, to be $300,000. In 1921, the increase in volume and traffic caused the old bridge structure to grow obsolete, and this obsolescence proceeded rapidly until 1924, when respondent, after consultation with its engineer, decided to replace it with a new one of modern type. The new bridge was begun in 1924 and opened to traffic May 30, 1925. Its construction was financed by the issuance and sale of $450,000 of 6% First Mortgage Bonds and $175,000 of 7% Preferred Stock. The then outstanding 6% First Mortgage Bonds, amounting to $50,000, which were owned by the holders of the Common Stock, were retired; and the holders thereof received $60,000 of 7% Preferred Stock in their place and stead. As the result of an appraisal in 1923, respondent's property account was increased $225,000, and a common stock dividend of the same amount, or 900%, was issued, thereby increasing the outstanding common capital stock from $25,000 to $250,000.

An analysis of respondent's Exhibit 9, which sets for the book value of the old bridge as of July 31, 1925, is as follows:

Year	Item	Book Value Before Adjustment	Adjustments by Respondent's Accountant in 1923	Book Value as Adjusted
1915	Cash	$ 3,000.00		
	First Mortgage Bonds	20,000.00		
	Common Stock	22,000.00		$ 45,819.35
	Incorporation Expense		$ 819.35	
1917	Payment on Contract, New Spans, etc.	10,000.00		10,746.87
	Labor and Material		746.87	
1918	Payment on Contract	20,000.00	7,600.00	27,600.00
1919	Replacement of Piers		5,364.27	5,364.27
1920	" " "	5,015.31		5,794.77
	Labor and Material		779.46	
1921	" " "		6,433.52	6,433.52
1922	" " "		1,554.95	1,554.95
1923	" " "		7,309.36	7,309.36
	Totals	80,015.31	30,607.78	110,623.09
1923	Appreciation on Basis of Appraised Value	225,000.00		225,000.00
		305,015.31	30,607.78	335,623.09
1925	Less Amount Received from the Sale of Old Bridge July 31, 1925	636.00		636.00
	Totals	$304,379.31	$ 30,607.78	$334,987.09

The above exhibit discloses that respondent's old bridge was recorded on its books as of December 31, 1922, at a book value of $80,015.31; and, as heretofore noted, a common stock dividend of $225,000 was issued in 1923, a corresponding amount being added to the bridge account for "Appreciation on Basis of Appraised Values." In 1925, a firm of public accountants was employed by respondent for the purpose of determining the expenditures for the

old bridge and the construction of the new bridge. As a result of this audit, the adjustments were made which added $30,607.78 to the old bridge account. These expenditures had previously been charged to operating expenses. After giving effect to these additions, the book value of the old bridge as of July 31, 1925, was $334,987.09. Summarizing the foregoing history of the old bridge from 1915 to 1925, it appears that respondent paid $3,000 cash and issued securities of a par value of $42,000 for property which originally cost the incorporators, as individuals, the sum of $4,500; and that, with the exception of the $30,000 of bonds issued in 1917 and 1918, the bridge was repaired and rehabilitated largely out of earnings. The estimated cost of the old bridge as of July 31, 1925, to the respondent, was therefore not in excess of $70,123.09, determined as follows:

Original Investment of	
Incorporators as Individuals	$4,500.00
Incorporation Expense	819.35
Renewals and Replacements	
Bonds Issued	30,000.00
From Earnings	34,803.74
Total	$70,123.09

A summary of respondent's Exhibit 9, Schedule "B," consisting of adjusted Profit and Loss Statements for the period from 1915 to July 31, 1925, conveys the following pertinent information relating to the operating progress of respondent:

Total Gross Revenue	$338,943.33
Total Operating Expenses	107,718.88
Net Earnings	$231,226.45
Less Interest Paid	25,814.49
Net Profit	$205,411.96
Dividends Paid	92,149.51
Accumulated Surplus	$113,262.45

Further analysis of Exhibit 9 indicates that the following dividends have been paid and (or) issued on respondent's Common Capital Stock:

Year	Common Stock Outstanding	Amount	Dividend %	Paid In
1916	25,000	$ 3,750	15	Cash
1917	25,000	6,000	24	"
1918	25,000			
1919	25,000			
1920	25,000			
1921	25,000	3,000	12	Cash
1922	25,000	13,500	54	"
1923	25,000	25,000	100	"
Total		51,250	205	Cash
1923	25,000	225,000	900	Stock
	250,000	1,500	0.6	Cash

The original cost of respondent's property from 1915 to 1923, inclusive, referred to heretofore, was $70,123.09. Consequently, the stockholders, in addition to having received an average yearly cash dividend of 25.7% during the period from 1916 to 1923, inclusive, and a stock dividend of 900% in 1923, had built up an accumulated surplus of $113,262.45, as of July 31, 1925, or $43,139.36 in excess of the estimated cost of the property to the respondent.

Respondent submitted in evidence Exhibits Nos. 5 and 6, which purport to be an estimate of the Reproduction Cost New of the new bridge. This estimate, which aggregated $1,122,736.50, may be summarized as follows:

Description	Item	Amount
COST OF BRIDGE		
Bridge and Approaches (Vang Construction Company)	$566,301.29	
Toll Houses	3,859.27	
Superintendent's Houses	5,815.83	
Moving Houses (North Approach)	3,470.82	
Electric Wiring & Fixtures	11,190.45	
Bronze Tablets	1,275.00	
Curb Angles	210.75	
Total Construction Cost	$592,123.41	
Engineering	$ 39,271.97	
Miscellaneous Charges	4,270.72	
Cost of Financing	74,522.86	
Interest Paid During Construction	20,912.11	
Cost of Removing Old Bridge (Est.)	21,950.00	
Cost of Finishing, Planting, Gardening, Etc.	1,700.00	
Total Cost of Bridge		$754,751.07
Portion of Appraisal of Old Bridge Transferred to New Bridge		52,101.20
Contractor's Losses—Labor and Materials	61,140.90	
Overhead, Depreciation & Plant Charge	82,000.00	143,140.90
Fair Profit to Contractor		70,000.00
Value of Location		100,000.00
Working Capital		2,733.33
Grand Total		$1,122,726.50

Since the new bridge was only recently constructed and the original cost of construction can be accurately determined—there being no material changes in unit prices in the meantime—the original cost may safely be accepted as representative of the reproduction cost new. The Commission will there-

fore accept as the fair reproduction cost of the bridge structure the actual construction cost of $592,123.41, plus an item of $130 which the testimony discloses was expended on the toll houses subsequent to the opening of the bridge.

The amount expended for engineering was for designing, supervision, surveys, and inspection of materials, and is accepted by the Commission as a reasonable amount for such services. The item of Miscellaneous Charges was actually incurred and will be allowed.

Under the item "Cost of Financing" respondent includes:

Discount on Sale of Bonds	$58,500.00
Discount and Commission on Sale of Preferred Stock	10,843.00
Professional Services	2,994.20
Expenses of Bond Issue	2,185.66
Total	$74,522.86

Respondent sold $450,000 par value of its First Mortgage 15-year 6% Bonds to bankers at 87, who in turn disposed of them to the public at 94. The difference between these two prices, in total $31,500, is a brokerage or underwriting fee rather than bond discount, and accordingly will be allowed as part of the cost of financing. The difference between par and the price paid by the public, in total $27,000, is, however, pure bond discount. The Commission in the present instance is adverse to the inclusion of this bond discount in the fair value or rate base, where it would be less burdensome on the rate-payers

and wholly fair to respondent to permit respondent to amortize the bond discount of $27,000 out of earnings over the life of the bonds. An annual contribution by respondent of $1,331 to a special fund earning 4% interest compounded semi-annually will amortize the bond discount in fifteen years. Accordingly an annual allowance of $1,331 for this amortization will be made.

On the $175,000 of 7% Preferred Stock issued, $115,000 was sold at par, less $843 for commissions and expenses; and the remaining $60,000 was issued and exchanged for $50,000 First Mortgage 6% Bonds, which were held by the incorporators and present owners of respondent company, the difference of $10,000 being regarded by respondent as discount on preferred stock. Inasmuch as $115,000 of this preferred issue was disposed of at par, and after a comparison of the two securities with regard to interest rate and margin of safety, the Commission is not convinced that this $10,000 represents a part of the cost of financing necessarily incurred. Excluding the above items of discount, the Commission will allow $37,522.86 for the cost of financing.

For Interest During Construction, respondent submits $20,912.11 as the net amount of interest paid during the period of construction, which the Commission accepts as being fair and reasonable.

The item "Cost of Removing Old Bridge," amounting to $21,950, is an estimate for the removal of nine piers (7,650 cu. yds. @ $3), less a salvage credit of $1,000 on the frame super-structure of the old bridge. Respondent contends that

this item should be included in the rate base because the U. S. War Department and the Pennsylvania Department of Forests, and Waters required of respondent, as a condition precedent to a permit to construct the new bridge, the promise that it would remove the old bridge structure and the stone piers which supported it. Since this expense will be necessarily incurred as the result of the requirement of public authority, it will be allowed as part of respondent's rate base.

The item "Cost of Finishing, Planting and Gardening, etc.," is believed to be fair and reasonable, and will be allowed.

Respondent's engineer submitted an estimate on the basis of depreciated reproduction cost for that portion of the old bridge property which remains used and useful to respondent, amounting to $52,101.20, made up as follows:

2 Abutments	$14,119.20
Retaining Wall	7,464.00
Approach Fills	12,000.00
Contingencies 5%	3,148.75
Engineering 6%	3,967.43
Financing 2%	1,401.82
Land and Real Estate Value	10,000.00
	$52,101.20

Respondent claims that these abutments, retaining walls, and approach fills of the old bridge, which are located on the up-stream side of the new bridge structure, afford protection to it against damage from ice and flood. The Commission believes that

respondent exercised sound economic judgment in incorporating this portion of the old bridge property into the new bridge property now used and useful in the public service. The respondent's engineer, however, did not give cognizance to the element of depreciation on overheads in the above estimate, or to the item of interest during construction (usually included in reproduction cost estimates). After giving effect to depreciation on overheads, at the same rates as those used by respondent, and including a reasonable amount for interest during construction, the Commission finds and determines that the depreciated reproduction cost of those portions of the old bridge property remaining used and useful is $49,100.

Respondent claims that the following items, aggregating $213,140.90, should be included in the rate base:

Contractors Losses		
Labor and Materials	$61,140.90	
Overheads, Depreciation and Plant Charge	82,000.00	
		$143,140.90
Fair Profit to Contractor		70,000.00
Total		$213,140.90

In its estimates of reproduction cost new and present fair value, respondent used the Cost to Contractor as the yard stick of measurement, rather than the Contract Price to Respondent. In support of its contention, respondent submitted the above amount of $213,140.90 and introduced testimony purporting to show that it received from the contractor

value in excess of the amount of money which it expended. The fact that the actual direct and indirect cost, plus a fair profit to the contractor, may have been greatly in excess of the contract price is not conclusive evidence that the contract price was not a true index of fair value during the period of construction. In the absence of evidence to the contrary, it is assumed that the contractor entered into the contract after mature and careful judgment had been exercised. If errors in judgment, unforeseen hazards, or difficulties beyond the ken of ordinary care were encountered, the contractor was liable and could not recover from respondent. Moreover, the attempt of the contractor to hasten the completion of the bridge may have resulted in unnecessary costs and expenses, which were not recouped by the receipt of $22,050, bonus for finishing the bridge 147 days prior to agreement. If the Commission were to adopt *cost to the contractor* as the basis of original or reproduction cost, this would involve an examination of the contractor's records for the purpose of determining whether the accounting was correct and whether the elements entering into the cost were fair and reasonable and also whether the contractor used good business acumen and sound engineering judgment in prosecuting the construction of the bridge. Reproduction cost in the present instance cannot be divorced from actual contract price; and as long as contractors continue to make bids and accept contracts on lump-sum or unit bases, such contract prices are better evidence of reproduction cost than the actual cost to the contractor, over which neither respondent nor the Com-

mission has any control. The public should not be compelled to pay rates on a rate base which includes such elements; consequently, the Commission will exclude these amounts from its estimate of fair value.

The Commission is unable to adduce from the evidence presented the equitableness of respondent's estimate of $100,000 for "Valuation of Location," which is claimed as an element of reproduction cost. The capitalization of such an item would, in essence, be demanding a return from the public for the use of a right inherent in the nature of the public's own property. The privilege to cross the river, irrespective of the site or location, is obtained from the body politic. Moreover, it is the duty of such a utility to exercise due caution and judgment in selecting the most economical site available consistent with public convenience; and, consequently the argument that a premium should be paid by the public on the exercise of such judgment is not sound. The Commission is, therefore, constrained to exclude this item from its estimate of fair value.

Respondent estimates $2,733.33 as an allowance for working capital which is equivalent to one-twelfth of the estimated operating expenses for 1925. This is the usual procedure adopted in mensuring working capital—the percentage used depending upon the frequency of the cash collections of the business. Respondent's operating revenue is received upon rendering the service or monthly in advance for the monthly privilege of using the bridge. Since working capital, properly considered,

is the sum of the requirements for purchasing materials and supplies and employing labor incident to maintenance and operation, for meeting other current operating expenses and taxes, and for placing current credit on a satisfactory basis, it is apparent that the respondent is being provided with this sum from day to day currently or in advance. Unlike other utilities having need of large quantities of materials and supplies, respondent's actual necessities in this respect are negligible. In view of the foregoing circumstances and conditions under which respondent's revenue is collected and its requirements for current operation and maintenance of credit, the Commission is of the opinion that respondent's claim for working capital has not been sustained.

In 1915, respondent company incurred an Incorporation Expense of $819.35 for which it submitted no claim. The Commission will include this item as an element of fair value.

After due consideration and giving effect to the foregoing conclusions, the Commission finds that the fair value of respondent's used and useful property is $767,800, determined as follows:

Cost of New Construction	$592,253
Engineering	39,272
Miscellaneous Charges	4,271
Cost of Financing	37,523
Interest During Construction	20,912
Cost of Finishing, Planting, etc.	1,700
Value of Old Bridge Transferred to New Bridge on Basis of Reproduction New	49,100

Cost of Removing Old Bridge (Est.)	21,950
Incorporation Expense	819
Total	$767,800

Respondent contends that it is entitled to a return in excess of 7% upon the fair value of its property because of the unusual hazards to which it is exposed. It also contends that the Susquehanna River presents greater hazards from ice than other rivers in this country. Respondent's position in this regard is not convincing. Respondent claims and the Commission will allow $2,500 annually for insurance, which, together with the fact that respondent's new bridge is of modern-type construction, designed to withstand severe strains incident to floods and ice, should adequately protect respondent's property. However, under the circumstances obtaining in this case, the Commission will allow a return of 7% upon the fair value of respondent's used and useful property, without deduction for Federal Income Tax, a full allowance for which has been included in operating expenses.

The parties were in substantial agreement as to the estimated gross revenue of $115,000 for the year 1925. The complainants contend that the gross revenue will increase materially in the future because of estimated increased traffic over the highways leading to the bridge. The respondent, however, claims that the new highway now under construction, leading from Newport through New Bloomfield and Carlisle to Gettysburg, will divert considerable through traffic from the west.

Respondent's Exhibit No. 6 contains the following statement of actual and estimated operating expenses:

	(Actual) Year	(Actual) Seven Months Year	(Estimated) Year
	1924	1925	1925
Salaries—Officers	$ 4,800.00	$ 2,800.00	$ 4,800.00
Salaries—Toll Keepers, etc.	2,400.00	2,100.00	
General Labor	5,012.78	2,357.50	8,000.00
Telephone	92.32	43.76	100.00
Light	60.77	215.22	2,000.00
Coal	58.50	127.10	250.00
Legal Service	135.00	32.90	150.00
Postage and Printing	191.64	321.04	500.00
Hose, Pipe, Supplies, etc.	172.28	42.44	100.00
Miscellaneous	92.10	25.36	100.00
Donations		125.00	125.00
Cleaning Snow			500.00
Maintenance			1,800.00
Insurance	4,946.42	2,062.97	2,500.00
Taxes:			
Federal Income Tax	3,647.20	3,209.63	6,419.26
Federal Capital Stock Tax	317.00	414.00	414.00
State Capital Stock Tax	240.00		2,500.00
State Loans Tax	200.00		1,800.00
State Emergency Profits Tax		151.77	151.77
Bond Tax of 2%	45.00	17.40	540.00
Local County Taxes	20.83		50.00
	$ 22,431.84	$ 14,046.09	$ 32,800.03

The item of $4,800 represents salaries of $1,200 annually, paid to each of the four common-stock-holding officers of respondent,—namely, President, Vice-President, Secretary and Treasurer. Taking into consideration the duties required of each of these officers in their official capacity, the Commission is of the opinion that $4,800 is excessive, and that $2,400 is a fair and reasonable allowance for officers' salaries.

With the exception of the items for Light, Donations, and Taxes, the other items of operating ex-

penses appear fair and reasonable and are accepted by the Commission. The estimate of $2,000 for light appears excessive, in view of the past expenditures for lighting the old bridge and the requirements for lighting the new bridge. The Commission will allow $1,200 per annum for this item. Donations are payable out of fair return and will therefore be excluded from operating expenses.

For the items of Federal Income Tax and Federal Capital Stock Tax, respondent claims $6,419.26 and $414, respectively. Since the passage of the Revenue Act of 1926, the Federal Corporate Income Tax has been increased from 12½% to 13% for the year 1925 and to 13½% thereafter, while the Federal Capital Stock Tax has been repealed. No allowance will be made for Federal Capital Stock Tax; and, in view of its findings hereinafter set forth with regard to allowable gross revenue, the Commission will allow $3,500 for Federal Income Tax. Respondent claims $2,500 for State Capital Stock Tax; the Commission believes that this estimate is excessive and will allow $2,000 for this item, which is believed fair and reasonable. For rate-making purposes, the State Loans Tax, State Emergency Profit Tax, and Bond Tax of 2% are not a part of the taxes to be included in operating expenses in determining allowable annual gross revenue.

The allowable annual operating expenses may be summarized as follows:

Officers' Salaries	$2,400
Salaries of Toll Keepers & General Labor	8,000

Coal, Light and Telephone	1,550
Legal Service	150
Postage and Printing	500
Hose, Pipe Supplies and Miscellaneous	200
Clearing Snow	500
Maintenance	1,800
Insurance	2,500
Federal Income Tax	3,500
State Capital Stock Tax	2,000
Local County Taxes	50
Total	$23,150

Respondent contends that it should be allowed to charge against earnings on the new bridge the sum of $28,941.48 annually which sum with interest will retire in ten years the reproduction cost new less depreciation of the abandoned portion of the old bridge, amounting to $213,011.70. Respondent's contention is untenable. The old bridge was constructed and owned by the State from 1828 to 1859, and subsequent thereto it became the property of The Pennsylvania Railroad Company. The record does not disclose whether or not the element of depreciation or obsolescence had been provided for by the original owners. Provision for depreciation, obsolescence, or inadequacy should have been made from revenue during the life of the structure. The failure of respondent to provide a depreciation reserve by means of an annual charge against earnings subsequent to 1915 does not augment its claim for the amortization of such abandoned property out of future earnings, particularly since its record of earnings, noted hereinbefore, was fully adequate

to provide a substantial amount for the amortization of the bridge structure, the obsolescence, and inadequacy of which must have been known to be imminent. Respondent's contention that future rate payers should reimburse the company for the amortization of an abandoned bridge structure nearly one hundred years old, coincident with the allowance by this Commission in the rate base of $49,100 for used and useful portions of the old bridge property, and $21,950 for the cost of its final removal, cannot be sustained. The Commission will therefore make no allowance for the annual amortization of the old bridge structure.

Respondent claims an annual alloyance of $20,152.86 for depreciation, which amount is based upon an estimated life of fifty years, or 2% annual depreciation on $1,007,643.17. Giving due consideration to the estimated life of the depreciable property included in the foregoing finding of fair value, the Commission is of the opinion that $7,678 is an ample allowance for annual depreciation.

Based upon the foregoing findings and determinations, the Commission concludes that the fair annual gross revenue to which respondent is entitled should not be in excess of $85,905, determined as follows:

7% Return on $767,800	$53,746
Annual Operating Expenses and Taxes	23,150
Annual Depreciation Allowance	7,678
Amortization of Bond Discount	1,331
Total Allowable Gross Revenue	$85,905

As the estimated gross revenue from Tariff P. S. C. Pa. No. 2, the tariff under attack, is approxi-

mately $30,000 in excess of the allowable gross revenue, the rates are found to be excessive and unreasonable. The respondent company will be directed to cease and desist from collecting toll at the rates contained in said tariff on and after June 30, 1926, and to file, post and publish, effective on or before July 1, 1926, upon not less than ten days' notice to the public and this Commission, a new tariff schedule designed to produce a gross annual revenue not in excess of $85,905. Although the evidence of record does not include traffic data sufficiently definite to support an order for specific rates, it would indicate that about 76.6 per cent of the gross revenue was derived from private automobiles for which the toll rate is 25 cents. The Commission is satisfied that the record justifies the suggestion and the public interest demands that in the new tariff the toll rate for private automobiles other than motor buses, regardless of seating capacity, should not exceed fifteen cents per automobile with no additional charge for extra persons. When filing said tariff with the Commission, the respondent company shall submit therewith the traffic data employed in arriving at the rates of toll therein.

THE PUBLIC SERVICE COMMISSION
OF THE
COMMONWEALTH OF PENNSYLVANIA
(Signed) WM. D. B. AINEY, *Chairman.*

Order

This matter being before The Public Service Commission of the Commonwealth of Pennsylvania, upon

complaint and answer on file, and having been duly heard and submitted by the parties, and full investigation of the matters and things involved having been had, and the Commission having on the date hereof made and filed of record a report containing its findings of fact and conclusions thereon, which said report is hereby approved and made part hereof:

Now, to wit, June 8, 1926, IT IS ORDERED: That the complaint be and is hereby sustained and that the Clark's Ferry Bridge Company, respondent, cease and desist from collecting toll at the rates contained in its Tariff P. S. C. Pa. No. 2 on and after June 30, 1926.

IT IS FURTHER ORDERED: That the Clark's Ferry Bridge Company, respondent, file, post and publish, effective July 1, 1926, upon not less than ten days' notice to the public and this Commission, a tariff schedule which will provide toll rates designed to yield annual gross revenue not in excess of $85,905.

IT IS FURTHER ORDERED: That the Clark's Ferry Bridge Company, respondent, when filing said Tariff with the Commission shall submit therewith the traffic data employed in arriving at the rates of toll proposed.

THE PUBLIC SERVICE COMMISSION
(SEAL) OF THE
COMMONWEALTH OF PENNSYLVANIA
(Signed) WM. D. B. AINEY, *Chairman.*

ATTEST:
JNO. G. HORWOOD, *Secretary.*

RESPONDENT'S EXHIBIT No. 1

INVENTORY AND APPRAISAL OF PROPERTY OF CLARK'S FERRY BRIDGE COMPANY, MADE BY AMERICAN APPRAISAL COMPANY AS OF SEPTEMBER 1,1929

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THE AMERICAN APPRAISAL COMPANY

Home Office
Milwaukee, Wis.

New York Office
120 Broadway

Boston
Philadelphia
Washington
Baltimore
Atlanta
Syracuse
Buffalo
Pittsburgh
Cleveland
Cincinnati

Chicago
Detroit
Indianapolis
Minneapolis
St. Louis
Kansas City
New Orleans
Dallas
Los Angeles
San Francisco

Seattle

MILWAUKEE

Public Utilities Division
Clarks Ferry Bridge Company,
Duncannon, Pa.
Gentlemen:

In accordance with your commission we are herewith submitting our report covering our investigation and appraisal on the basis of the cost of reproduction new in like kind of the property designated as owned by your company.

This report contains a summary of the intangible costs and tangible costs, descriptive report of methods and basis of appraisal, detail of quantities appraised, discussion of other elements of intangible value, and location maps prepared in connection with the appraisal.

The investigation and appraisal was made to determine the cost of reproduction new and cost of reproduction less depreciation of the property. The cost of reproduction as determined and set forth in this report is the result of a personal investigation of the property, of the conditions under which it was constructed and the conditions under which it would be constructed at the present time, if now

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nonexistent. A very careful analysis has been made of the items constituting the bridge to determine the expenditures that would be necessary for the reproduction new in like kind according to the market conditions for material and labor at the date of the appraisal, September 1, 1929.

The intangible costs represent the expenditures in addition to the cost of the physical property that

would be necessary to reproduce the organization and existing rights at the date of appraisal.

In accordance with the methods just explained, we have found the cost of reproduction new and cost of reproduction less depreciation of the property, exclusive of going value and bridge head rights as explained in the accompanying report, as of September 1, 1929, to be as follows:

	Cost of Reproduction New	Cost of Reproduction Less Depreciation
1. Intangible Costs	$ 82,320.00	$ 82,320.00
2. Tangible Costs		
Direct Construction Costs	718,504.30	704,054.30
Indirect Construction Costs	91,102.00	89,270.00
Total	$891,926.30	$875,644.30

We therefore report the cost of reproduction less depreciation of the bridge and cost of reproduction of the organization and rights to be Eight Hundred Seventy-five Thousand Six Hundred Forty-four Dollars and Thirty Cents ($875,644.30).

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This amount is exclusive of working capital and other intangible value as discussed in this report.

Respectfully submitted,
James W. White,
Paul B. Johnson,
Appraisers for The American Appraisal Company.

Reviewed and Approved,
The American Appraisal Company,
By W. A. Bailey,
Vice President.

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SUMMARY

SHOWING COST OF REPRODUCTION NEW AND COST OF REPRODUCTION LESS DEPRECIATION OF THE CLARK'S FERRY BRIDGE, DAUPHIN COUNTY, PENNSYLVANIA

Intangible Costs:		
Promotion and Preliminary	$ 10,125.00	
Organization and Incorporation	10,125.00	
Financing	58,090.00	
Interest on Intangible Expenditures	3,980.00	
Total		82,320.00
Tangible Costs:		
Direct Construction Costs		
Bridge Head Lands	11,350.00	
Clearing Right of Way	8,547.91	
Bridge Structure	690,506.39	
Bridge Office	8,100.00	
Total		718,504.30
Indirect Construction Costs		
Engineering and Supervision	43,027.00	
Administrative, Legal and Incidental	9,930.00	
Interest during Construction	38,145.00	
Total		91,102.00

Grand Total Cost of Reproduction.....$891,926.30
Observed Deterioration or Loss in Value 16,282.00
Cost of Reproduction Less Depreciation .$875,644.30

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GENERAL REPORT

Location and Description:

Clark's Ferry Bridge Company owns and operates a highway toll bridge across the Susquehanna River at Clark's Ferry, Dauphin County, Pennsylvania. This bridge is located in a rural district just above the confluence of the Juniata and Susquehanna Rivers, 14 miles north of the City of Harrisburg and 39 miles south of the City of Sunbury. It is the only highway bridge crossing the river between these two cities, a distance of 53 miles. In addition to serving local traffic U. S. Routes 11 and 111, known as the Susquehanna Trail, and U. S. Route 22, known as the Wm. Penn Highway, cross the bridge. U. S. Route 209 joins U. S. Route 11 at the south end of the bridge and State Highway 5 passes through Duncannon a short distance from the north end of the bridge. The routes served, which are all improved hard surfaced highways, are shown on the map, Exhibit A, accompanying this report.

History:

The first bridge across the river at Clark's Ferry was originally built by the Commonwealth of Pennsylvania under an act approved by the legislature March 29, 1824,

"To authorize the Governor to incorporate a

company for the purpose of erecting a permanent bridge over the river Susquehanna in the County of Dauphin, where the turnpike road crosses the same, near Clark's Ferry."

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This bridge was completed in 1829 and operated as a toll bridge by the State in connection with the State Canal System, being used both for highway and tow path purposes until 1857 when it was sold together with the Canal System to the Pennsylvania Railroad Company. The railroad company continued the operation of the toll bridge until 1915 when it was sold to Mr. Christian W. Lynch. Under date of September 30, 1915, it was deeded by him to Clark's Ferry Bridge Company.

The Clark's Ferry Bridge Company was incorporated May 20, 1915, under the laws of Pennsylvania, "formed for the construction and acquisition and improvement, operation, and maintenance of a bridge and approaches thereto over the Susquehanna River from a point on the highway leading from Harrisburg to Sunbury, being route one of the State Highways to a point on the opposite side of said river at the southern end of Duncan's Island, Reed Township, Dauphin County, Pennsylvania, . . . the said corporation is to exist perpetually."

The incorporators and stockholders of the company were as follows:

Wm. Jennings, President;
C. W. Lynch, Vice President;
P. F. Duncan, Treasurer;
Wm. Wills, Secretary.

After several years operation it became apparent

that the old bridge, a covered wooden structure, would soon be unable to handle the traffic which was rapidly increasing both as to number and weight of vehicles, and Mr. Frank M. Masters, Consulting Engineer

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of Harrisburg, was retained by the company to make preliminary surveys, design, and supervise the construction of a concrete bridge.

Before a new bridge could be constructed it was necessary to have a special act passed by Congress and the plans and specifications approved by the War Department. This act, Public No. 63 - 68th Congress, S2446 -

> "An Act granting the consent of Congress to the Clark's Ferry Bridge Company, and its successors, to construct a bridge across the Susquehanna River at or near the railroad station of Clark's Ferry, Pennsylvania."

was approved by Congress March 27, 1924, and the plans and specifications approved by the Secretary of War May 27, 1924.

The contract for the construction of the bridge was awarded to the Vang Construction Company of Cumberland, Maryland, on June 10, 1924, and the bridge completed and opened for traffic May 30, 1925. Subsequently the old bridge, the center line of which was 54 feet above the center line of the new bridge, was removed as required by the War Department.

Description of Physical Property:

The Clark's Ferry bridge is a reinforced concrete structure, 2074.5 feet long from face to face of abut-

ments, consisting of 15 arch spans of open spandrel type of construction, carrying a concrete roadway 20 feet wide in the clear and a concrete sidewalk 4 feet in width. The deck is approximately 32 feet above normal water

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level. Approaches at each end connect the bridge proper with state highways, at which points massive concrete monuments mark the bridge location and carry direction signs for traffic. The bridge is lighted throughout its length with standards and lamps of artistic design.

A concrete toll house and a shelter for the use of collectors are located at the north end of the bridge, while immediately north of the north approach a two story stucco house is used as the bridge office and bridge superintendent's residence.

The bridge head lands consist of two irregular shaped tracts each having a frontage on opposite banks of the river of about 500 feet, and each extending back to the public highways passing the approaches. In addition to these two tracts, the company owns the lot across the highway adjacent to the north approach upon which is located the bridge office. The south end of the bridge is near Clark's Ferry Station on the Williamsport Division of the Pennsylvania R. R., while the north end is in the village of Benvenue, 1½ miles above Duncannon, which is on the main line of the Pennsylvania R. R. A general plan of the bridge and the land owned is included in this report as Exhibit B. U. S. topographic survey maps, a reproduction of which ac-

companies this report as Exhibit C, indicate that this location at Clark's Ferry is the narrowest point in the river between Harrisburg and Sunbury. A survey of the site also shows

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that solid rock is continuous across the river bed at this point at an average depth of less than 5 feet below normal water level. These circumstances, combined with the absence of railroad rights of way immediately adjacent to the river bank, a condition which occurs at points which might otherwise be possible bridge sites, make this particular location the most favorable one for a highway bridge for many miles either up or down the river. A bridge at any other point on the river serving the same traffic would of necessity cost considerably more to construct.

Highway Connections and Traffic Influences:

Due to the strategic location of this bridge with respect to both the State and U. S. highway systems, the traffic using it has been rapidly increasing, particularly since 1922 when the improvement of what is now U. S. Route 11 was completed in this vicinity. This route is a marked through highway from Montreal, Canada, to New Orleans, that section from Sunbury to Harrisburg being part of the Susquehanna Trail, widely known for its scenic beauty. U. S. Route 111, from Baltimore to New York State line south of Corning joins U. S. Route 11 from Harrisburg to Sunbury and together with the latter highway crosses the river on the Clark's Ferry Bridge.

U. S. Route 22, which also crosses the bridge, is known as the Wm. Penn Highway from New York City through Pittsburgh to Cambridge, Ohio, where it connects with U. S. Route 40, the National Pike,

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a transcontinental road from Washington to San Francisco.

While most of the highway improvements in this section of the state up to the present time have apparently had a tendency to increase traffic across the Clark's Ferry Bridge, further improvements now under way or contemplated will no doubt divert part of this traffic. This diversion of traffic will be brought about by the completion of certain State Highway projects.

A combination of Routes 5, 33, and 34 affords a cut off for traffic coming from the west enroute to Gettysburg, a Mecca for many tourists. This traffic has followed U. S. Route 22 into Harrisburg and thence to Gettysburg on U. S. Route 15. A shorter route, and probably a preferred one when concreting now in progress is completed, leaves Route 22 at Newport, 13 miles west of Clark's Ferry, follows Route 5 to Meeks Corner, Route 33 to Carlisle, and Route 34 to Gettysburg, a considerable saving in distance as compared with the other route.

The completion of Route 14 from Sunbury to Millersburg, which will probably be accomplished within two years, will furnish a through highway along the east bank of the Susquehanna River and carry part of the traffic which now uses Route 11 on the west bank.

While Route 5 is now hard surfaced from Harris-

burg via Wormleysburg and Duncannon to the north end of Clark's Ferry Bridge, and concrete part of the way, it has many tortuous curves and heavy grades and is about 3 miles longer than Route 11 which is a much more desirable route. This condition increases traffic across

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Clark's Ferry Bridge. Reconstruction of this highway to improve conditions, particularly at Marysville, which is reported to be under contemplation, would tend to divert traffic from crossing the river at Clark's Ferry.

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BASIS OF VALUATION

General:

The basis of this appraisal is the Cost of Reproduction New in like kind of the physical property as of September 1, 1929, and the Cost of Reproduction of the Intangible Property, which would include all additional expenditures that would be required over and above the net cost of the bridge in operation as a going concern.

Periods of Developement:

The time element as a factor in establishing the Cost of Reproduction of the project has been divided into four general periods with some overlapping of the character of the expenditures during each period as follows:

1. *Promotion and Preliminary*:

Assuming the inception of the idea by a group of business men, it would be necessary for them

to have made an extensive investigation to determine the feasibility of the project, the best location and probable cost, the necessary legal procedure, and to make traffic surveys and economic studies of all factors relevant to the success of the project. It is estimated that this investigation would require a period of at least one year.

2. Organization and Incorporation

During this period, estimated at six months, the company would be incorporated, the organization perfected, necessary permits and franchises obtained, and a start made toward assembling the necessary capital.

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3. Financing and Financing Period

During this period, estimated at six months, the necessary financing would be completed, engineers would be employed to draw up plans and specifications, and contracts would be let.

4. Construction Period

During this period, estimated at 16 months, all construction work would be completed and the bridge put in operation.

The construction period as here established exceeds the actual construction period by four months. The bridge as actually constructed was done under rush conditions and the contractor was paid a bonus for completing work under sixteen months, which was the assumed normal construction period stated in the contract. The period here assumed and the unit

prices developed and used are for normal construction program.

Classification:

For purposes of appraisal, all items of property and elements of value have been classified as follows:

Tangible Costs:

Bridge Head Lands;
Clearing of Right of Way and Removal Old Bridge;
Bridge Structure and Toll House;
Bridge Office;
Indirect Construction Costs.

Intangible Costs:

Promotion and Preliminary Investigation;
Organization and Incorporation;
Financing;
Interest on Intangible Costs.

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TANGIBLE COSTS

Bridge Head Lands:

Under this classification there have been included three tracts of land as follows:

South Approach: A tract of land having an area of 1.516 acres lying between the east bank of the Susquehanna River and the public highway on which is located the south end of the bridge and approach.

North Approach: A tract of land having an area of 1.6 acres lying between the west bank of the Susquehanna River and the public highway on which is located the north end of the bridge and approach, also the toll house.

Bridge Office Lot: A tract of land having an area of .271 acres fronting on the public highway opposite the north approach on which is located the bridge office.

These lands are valued on the basis of market conditions for lands in this vicinity having highway and river frontages.

Clearing of Right of Way and Removal Old Bridge Piers:

To clear the right of way and make proper highway connections at the north end of the bridge, it was necessary to remove the old toll house and dwelling, a frame building 34x48 feet, which was demolished. It was also necessary to move a two story frame dwelling 20x36 feet. As part of the consideration for the new right of way, this building was moved across the highway to a plot of ground acquired for the purpose and placed on a specially constructed concrete foundation and basement.

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Upon the completion of the new bridge the War Department required that the old bridge be removed including the piers. These items are included in the appraisal at reported cost.

Bridge and Other Structures:

The value of the bridge, approaches, toll houses, and office is based upon the estimated cost to replace the property in like kind as of September 1, 1929, under market conditions for materials and labor existing at that date. For this purpose the final engineering estimate prepared by Mr. Frank M. Masters showing

the quantities of the various elements entering into the construction of the bridge has been used, after a thorough personal inspection and check of these quantities against the drawings and measurements of the structures proper found them to be correct. To the quantities thus established, unit prices have been applied based on the estimated cost to replace the property new, at the date of appraisal. These unit prices include the cost of labor and materials, freight, handling and placing, contractor's plant and overhead, contingencies, and profit.

The toll houses, office, and miscellaneous items entering into the bridge structures and approaches have been inventoried and valued on the same basis. The approach fills and retaining walls of the old bridge, which are located adjacent to the new bridge on the upstream side, afford protection to the latter against flood and ice damage.

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They are useful parts of the new structure, inasmuch as if not present, it would have been necessary to provide other suitable protection at equal, if not greater cost than the estimated Cost of Reproduction New as appraised herein.

Indirect Construction Costs:

Indirect construction costs which are in addition to the cost of material and labor entering into the bridge structures, and which cannot be assigned to the individual items or classes of property include, (1) Engineering and Supervision, (2) Administrative, Legal and Incidental Expenditures During Construction, (3) Interest During Construction.

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COST OF REPRODUCTION LESS DEPRECIATION

From the total Cost of Reproduction deduction has been made for observed deterioration or loss in desirability for ownership to determine the Cost of Reproduction less Depreciation.

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INTANGIBLE COSTS

Promotion and Preliminary Investigation:

This item includes the estimated cost of retaining the necessary engineering, legal, and other professional services to make preliminary investigations and reports to determine the feasibility and economic possibilities of the project, together with all traveling and miscellaneous expenses connected therewith, and reasonable compensation to the promoter.

Organization and Incorporation:

This item includes the cost of perfecting the organization, incorporating the company, obtaining the necessary permits, franchises, and approval of constituted authorities, including salaries of executives and clerks, legal services, traveling and miscellaneous expenditures required prior to the construction period.

Financing:

This item includes that portion of the salaries of executives and clerks that reflects the time elements expended in interesting capital and carrying on the negotiations for obtaining it, together with the necessary office and incidental expense involved. It

also includes a fee to be paid to the brokers for marketing the securities issued in assembling the capital required. No allowance, however, has been made to provide for any premium that might be reflected in this item caused from the necessity

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of selling securities at a discount, and the total estimated cost of assembling capital is, therefore, to be regarded as an item of preliminary expense that would be required under normal conditions under the assumption that the security was sound and worth its par value to the purchaser.

Interest on Intangible Costs:

This item consists of the accrued interest on the funds invested in intangible property during the period prior to the completion of the bridge structure. It bears the same relation to the intangible costs as interest during construction bears to the direct construction costs.

Other Elements of Intangible Value:

In addition to the Tangible and Intangible Costs herein recognized to establishing the Cost of Reproduction, there are other values that would be recognized if the property was privately owned and not subject to regulation.

In accordance with many decisions of courts and commissions, this value should be recognized in establishing a "Fair Value" for determining rates.

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We here quote from the case of McCardle vs. Indianapolis Water Company as decided by the United States Supreme Court P. U. R. 1927A, page 27:

"Any reasonable man with a knowledge of this property and the local conditions would unhesitatingly affirm that it has a value far in excess of the value of the pipe, buildings, grounds, and machinery.

"The decisions of this court declare: that there is an element of value in an assembled and established plant, doing business and earning money, over one not thus advanced, is self evident. This element of value is a property right, and should be considered in determining the value of the property, upon which the owner has a right to make a fair return when the same is privately owned although dedicated to public use. DesMoines Gas Co. vs. DesMoines, 238 U. S. 153, 165; 59 L. ed. 1244, P. U. R. 1915D 577, 584, 35 Sup. Ct. Rep. 811; Denver vs. Denver Union Water Co., 246 U. S. 178, 191, 192, 62 L. ed. 649, P. U. R. 1918C 640, 38 Sup. Ct. Rep. 278, and see National Waterworks Co. vs. Kansas City, 10 CCA 653, 62 Fed. 853, 865; Omaha vs. Omaha Water Co. 218 U. S. 180, 202, 203 54 L. ed. 991, 30 Sup. Ct. Rep. 615, 48 L. R. A. (N. S.) 1084 and cases cited."

With the foregoing citation as a legal authorization, we herein enumerate certain advantages the owners of this bridge have over others that might be considering constructing a bridge serving the same district as of the date of this report.

Attached Business Value:

The Cost of Reproduction as herein determined has included the expenditures that would be made to reproduce in like kind the bridge and the necessary

expenditures that would be required to reproduce the organization and secure the rights now owned by this bridge company. There has been included no element of

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value, due to the advantage the owners of this bridge would have on account of the business now attached over the owners of a bridge without business attached. If another bridge should be constructed beginning at the date of this appraisal, sixteen months would elapse before such bridge could begin to earn. The existing bridge during that period, if limited to 8 per cent return per annum on the Cost of Reproduction, would have earned $95,138.00, or if the return were fixed at 8 per cent on the Cost of Reproduction and other values here mentioned, the earnings would exceed $110,000.00. If these amounts are lessened by the amount of interest during construction, $38,145.00, as allowed in the physical plant, the indicated advantage to the owners of this bridge over a bridge on which construction was just starting would be $57,000.00 to $72,000.00. This value has not been included with the Cost of Reproduction shown in this report, but is here mentioned as an element to be considered in establishing "Fair Value" as a rate base.

Location Value:

Over and above the values set forth in prior sections of this report, there exists an additional element of value which cannot be reflected in an estimate of actual cost. This additional value is inherent in this location as a bridge site, due to its special advantages for this purpose.

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Chief among these advantages is that a bridge crossing at any other point on the river for many miles in either direction, would probably cost $150,000.00 to $200,000.00 more than at this particular point where the river is narrower than elsewhere, the river bed conditions favorable, and neither bank occupied by railroad rights of way. The topography of the country is such as to make this a logical crossing point, as evidenced by the reference in the legislative Act of 1804 to the turnpike road crossing the river near Clark's Ferry.

These conditions no doubt account for the fact that the Clark's Ferry bridge is the only highway bridge across the Susquehanna River between Harrisburg and Sunbury.

Therefore, the natural advantages of these bridge head rights have a property value that would be considered in transfer or free barter. These rights would be recognized by a common carrier, if seeking such a location for the construction of a bridge. Consequently, in our opinion such value should be recognized in determining a rate base for establishing fair tolls in the amount of at least $100,000.00.

(Page 23)

DETAILS

Intangible Costs

Promotion and Preliminary Investigation:

Being the necessary capital expenditures for the preliminary surveys and investigations after inception of the idea to determine the feasibility of the project, pos-

sible location of the bridge, probable traffic, local demand, and legal steps necessary for its accomplishment, and reasonable compensation to men of talent who would conceive and carry through to completion an enterprise of this character...	$10,125.00
Organization and Incorporation:	
Being the necessary expenditures in the creating and developing of the original organization, incorporation of the company, obtaining permits and franchises, including salaries of executives, legal services, traveling and incidental expenses	10,125.00
Financing:	
Being the estimated cost of acquiring capital for the construction of the bridge and development of the project, obtained with the assistance of banking houses and brokers, but without any allowance for additional cost that might be incurred through the necessity of selling securities at a reduced price in order to market them	58,090.00
Interest on Intangible Expenditures:	
Interest on intangible expenditures incurred during promotion and organization periods	3,980.00
Total Intangible Costs.....	$82,320.00

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BRIDGE HEAD LANDS

South Approach:

The site of the south approach consists of two adjoining parcels of land in Reed Township, Dauphin County, Pennsylvania, and more particularly described as follows:

Parcel No. 1—

That portion of the Wisconisco Division of the canal extending from a point 150 feet above the head of the outlet lock known as No. 1 at Clark's Ferry, said point being the western boundary of the canal conveyed by Pennsylvania Canal Company to Northern Central Railway Company by deed dated Feb. 21, 1890, thence westerly a distance of 400 feet, more or less, to a point at the intake slip from the Susquehanna River and dam across said river at Clark's Ferry, said point being the eastern boundary of that portion of the canal conveyed by the Canal Company to the Pennsylvania R. R. by deed dated October 31, 1901. Having an estimated area of..... 1.152 acres

Parcel No. 2—

Beginning at a point in the northerly line of State Highway Route 1 (now Route 11) at a distance of 91

feet measured northerly from a point in and at right angles to the northerly rail of the east bound track of the railroad of the Northern Central Ry. Co., said point in rail being distant 280 feet measured easterly along said rail from a point therein opposite to the middle of Clark's Ferry passenger station; thence N 27° E 213 feet; thence N 69° E 50 feet to the westerly line of land of Clark's Ferry Bridge Co.; thence by said land as follows:— 1st S 17° 30′ E 130 feet; 2nd crossing the approach to present bridge over the Susquehanna River, N 72° 45′ E 45 feet; 3rd N 81° 45′ E 110 feet to the northerly line of the

(Page 25)

State highway; thence by the highway as follows: 1st westerly on a line crossing towards the left with a radius of 3000 feet, recrossing the approach to said bridge a distance of 249 feet; 2nd S 67° 31′ W 100 feet to point of beginning.

Containing ..... .394 acres

Total Area Land—

South Approach ..... 1.546 acres

North Approach:

The site of the north approach consists of an irregular shaped tract of land in Reed Township, Dauphin County, Penn-

sylvania, and more particularly described as follows:

> Beginning at a point on the western low water line of the Susquehanna River about 90 feet west of the center line of the new Clark's Ferry Bridge, thence northeasterly by a line curving to the left with a radius of 15 feet a distance of 23.5 feet to a point on the face of the masonry retaining wall, thence along wall N 16° 15' 20" W 106.12 feet, thence along face of wall by a line curving to the right with a radius of 15.75 feet a distance of 24.7 feet, thence N 16° 48' W 22.21 feet, thence N 33° 12' W 130.12 feet, thence N 14° 49' 10" E 70.08 feet, thence S 75° E 75 feet more or less to corner of land formerly of Thomas Hume, thence easterly along property of H. L. Lukens 64 feet, thence northerly 75 feet to point at property of John A. Ziegler, thence easterly along last mentioned property 180 feet to the Susquehanna River, thence southerly along river 340 feet, thence westerly along river 150 feet more or less to place of beginning.
>
> Having an estimated area of about 1.6 acres

Also an easement over the following described tract of land:

Beginning at a point on the south line of the 18-foot road from Duncannon to Clark's Ferry Bridge, being 69.93' feet east of the east end post at the east end of the south

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curb on Juniata Bridge, thence along concrete road S 73° E 80 feet, thence N 14° 49' 10" E about 24 feet to a point on the south line of another 18 foot road leading from Duncannon to Benvenue, thence southwesterly along southern line of last mentioned road and curving to the right about 84 feet to place of beginning.

Containing 800 square feet.

Total Area Land—

North Approach ..... 1.6 acres

Bridge Office:

The bridge office site is located immediately north of the north bridge approach and adjoins the land described above. It is located in Reed Township, Dauphin County, Pennsylvania, and is a parcel of land having a frontage on the highway of about 66 feet and a depth of 200 feet.

Containing an estimated area of..... 0.271 acres

Total Area Bridge Head Lands.... 3.417 acres

Valued at $11,350.00

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CLEARING OF RIGHT OF WAY AND REMOVAL OF OLD BRIDGE

Clearing of the right of way, consisting of the removal of two frame buildings, one of which was moved and replaced on a new concrete foundation on a plot of ground provided for the purpose, the other one being demolished.	
At a cost of	$4,069.28
Removing 9 old bridge piers containing 1,650 cubic yards of stone	
At a cost of	4,478.63
Total	8,547.91

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CLARK'S FERRY BRIDGE

Reinforced concrete structure 2074' 6" between face of abutments, consisting of 15 spans 127' 6" between piers, with 20' 0" roadway and 36" walk, 1 side, piers and abutments of heavy reinforced concrete on concrete footings, including cofferdams and pumping, reinforced concrete ring arches, with open type spandrel wall supporting road slab, reinforced concrete road slab, railings and walks, concrete Toll House at north end of bridge, concrete paving and railings on north and south approaches, entire structure equipped with electric lighting controlled from Toll House.

Item No. 1		
2500 cubic yards excavation and back fill for abutments and retaining walls	$ 2.85	$ 7125.00
Item No. 2		
10616 cubic yards fill in approach	2.10	22293.60
Item No. 3		
2008 cubic yards excavation for piers	4.45	8935.60
Item No. 4		
300 cubic yards rock excavation for piers	10.65	3195.00
Item No. 5		
225 lin. ft. drilling for dowels	2.00	450.00
(Page 29)		
Item No. 6		
2034 cubic yards 1:2:4 concrete in pier and abutment footings	16.20	32950.80
Item No. 7		
2792 cubic yards 1:2½:5 concrete in piers from top of footing to 1'0" below spring line	15.45	43136.40
Item No. 8		
2620 cubic yards 1:2:4 concrete in abutments and piers from 1'0" below spring line to 6'0" above line	16.20	42444.00
Item No. 9		
1824 cubic yards 1:3:6 concrete in piers from 6'0" above spring line to underside of road slab	14.80	26995.20

Item No. 10		
9496 cubic yards 1:2:4 concrete in arch rings, retaining walls, abutment spandrel walls, arch ring saddles, roadway curbs, cross walls and road slabs....	28.15	267312.40
Item No. 11		
867 cubic yards 1:2:4 concrete in railings, lamp standards and sidewalks	27.75	24059.25
Item No. 12		
3271 square yards concrete paving on approach and highways	4.90	16027.90
(Page 30)		
Item No. 13		
10700 square feet waterproofing on back of retaining walls and abutments	.08	856.00
Item No. 14		
3500 square feet Elastite for expansion joints	.40	1400.00
Item No. 15		
14950 pounds zinc plates	.25	3737.50
Item No. 17		
1079718 pounds reinforced steel.	.0637	68778.04
Item No. 19		
36 cast iron drain inlets.....	50.00	1800.00
Item No. 20		
Necessary cofferdams, including pumping, etc.		51681.82

Item No. 21

Electric Lighting System consisting of lamp standards, wiring in conduit, transformers, slate panels, etc.		16856.88
Miscellaneous items of construction consisting of Concrete Toll House, Concrete Lamp Standards, Bronze Tablets, Guard Angles, Landscape Work, etc.		10571.00
Total		$650,606.39

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Construction remaining from Old Bridge useful in new structure:		
8000 cubic yards earth fill	2.10	16800.00
2200 cubic yards stone retaining wall	10.50	23100.00
Total		39,900.00
Grand Total of Bridge		$690,506.39

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Bridge Office

2-story and basement brick stucco dwelling —26'0" x 30'0" including plumbing, heating, and electric lighting	$ 8,100.00

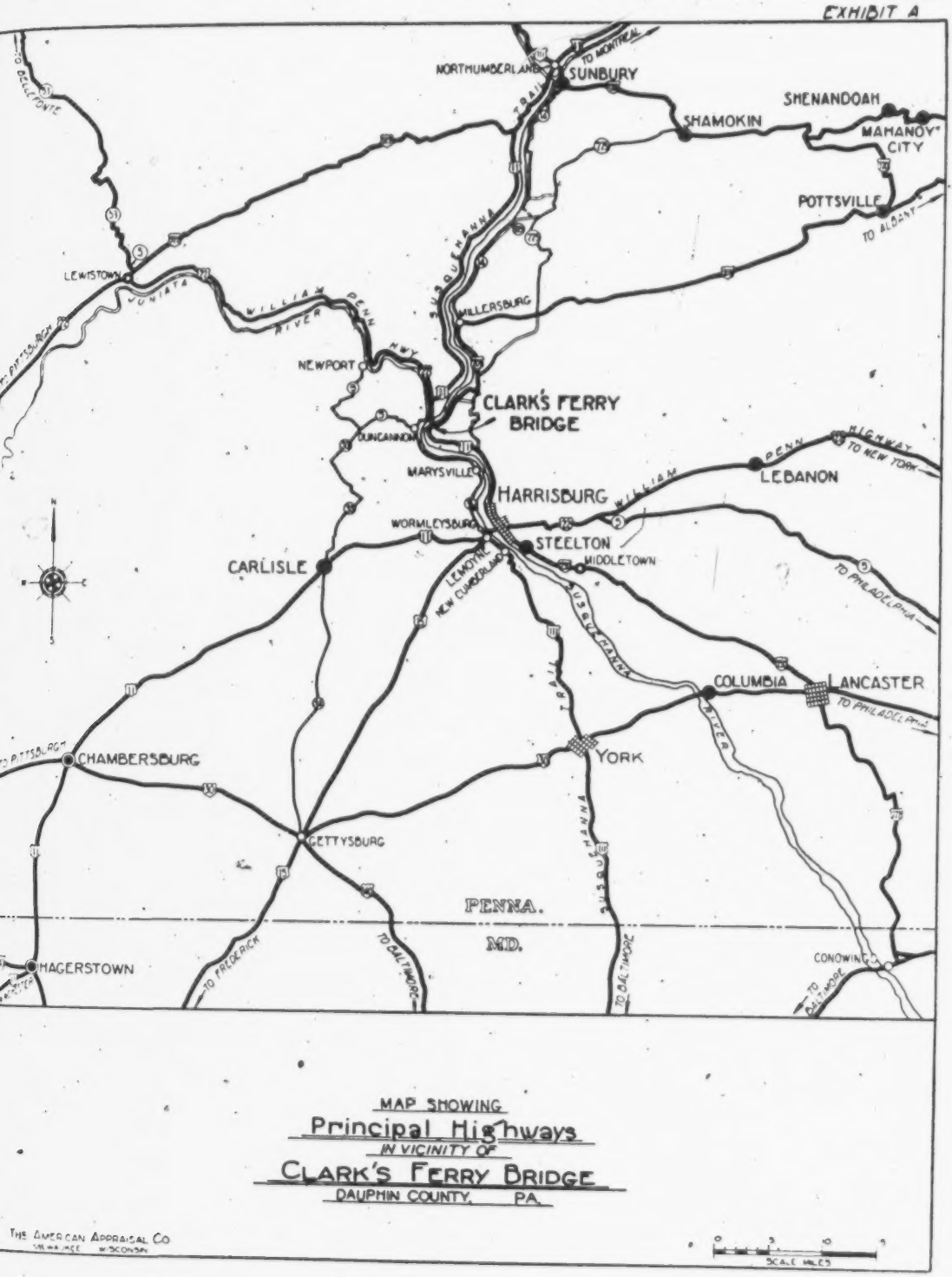
(Page 33)

Indirect Construction Costs

1. Engineering and Supervision:
Engineering and design; being the

direct expenditure for plans, specifications, and supervision during construction	$43,027.00
2. Administrative, Legal, and Incidental Expenditures During Construction:	
Administrative expenditures during construction include compensation to executives together with their necessary office and incidental expenses considered as applicable to construction.	
Legal expenditures would include fees paid for legal consultation and service incident to construction work	9,930.00
3. Interest During Construction:	
Interest during construction includes interest on money while invested in or on hand for investment in the bridge, from the time the money was assembled until the structure became operating	38,145.00
Total Indirect Construction Costs	$91,102.00

EXHIBIT A



MAP SHOWING
Principal Highways
IN VICINITY OF
CLARK'S FERRY BRIDGE
DAUPHIN COUNTY, PA.

THE AMERICAN APPRAISAL CO
MILWAUKEE WISCONSIN

Respondent's Exhibit No. 1

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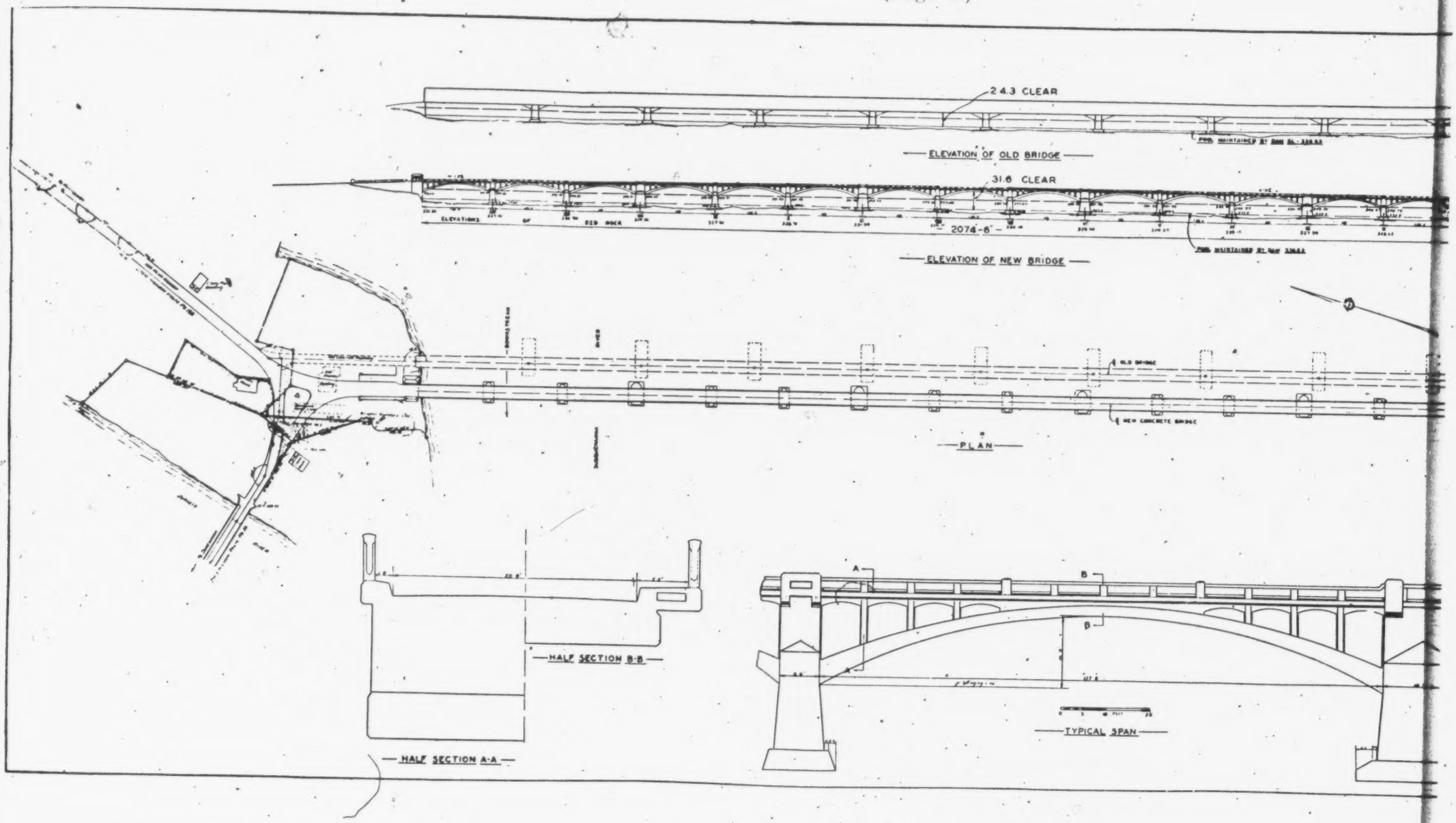


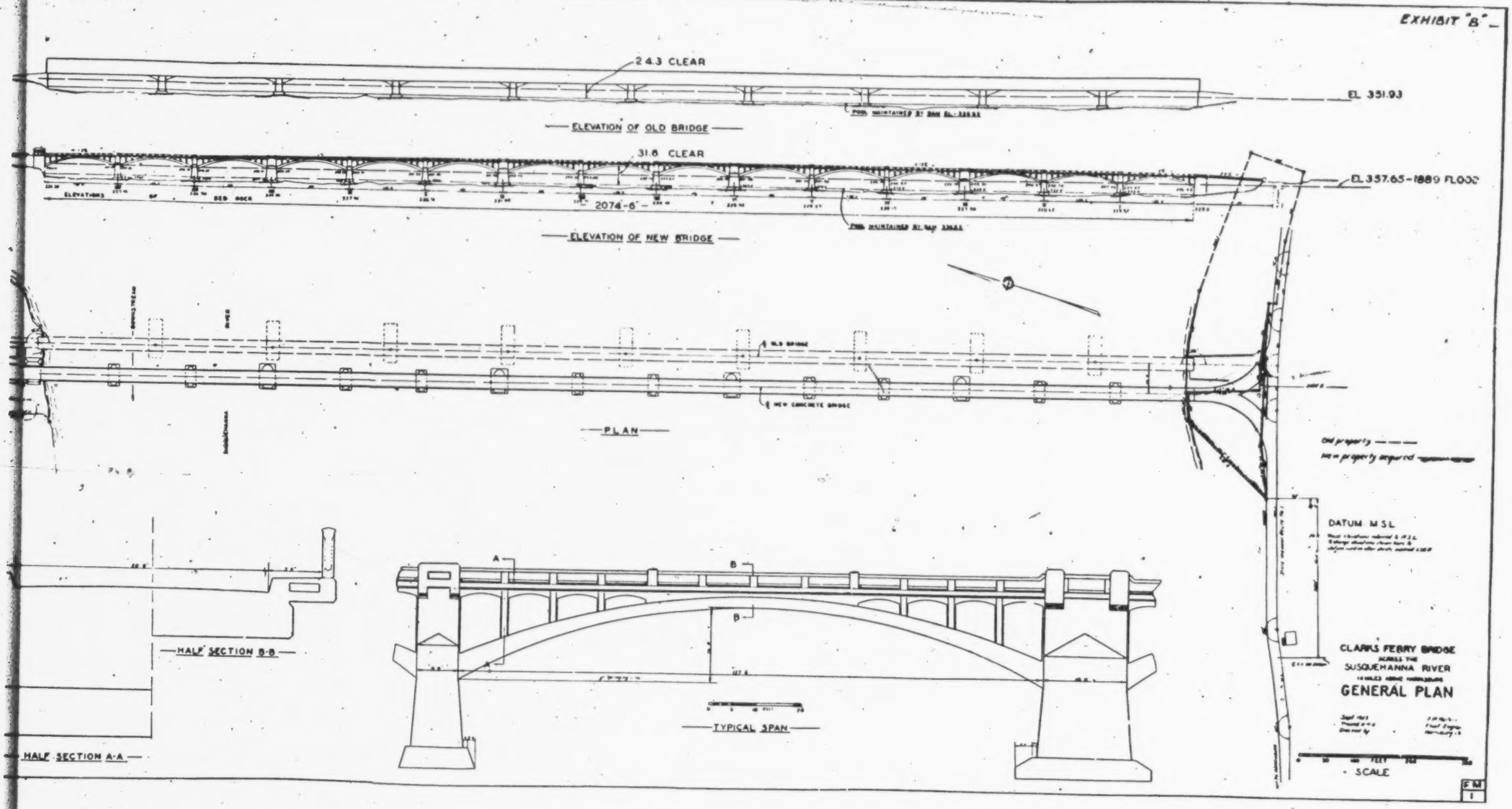


EXHIBIT "B"
24.3 CLEAR
EL. 351.93
ELEVATION OF OLD BRIDGE
31.6 CLEAR
EL. 357.65-1889 FLOOD
2074-6
ELEVATION OF NEW BRIDGE
PLAN
DATUM M.S.L.
HALF SECTION B-B
HALF SECTION A-A
TYPICAL SPAN
CLARKS FERRY BRIDGE
ACROSS THE
SUSQUEHANNA RIVER
GENERAL PLAN
SCALE
FEET

MAP

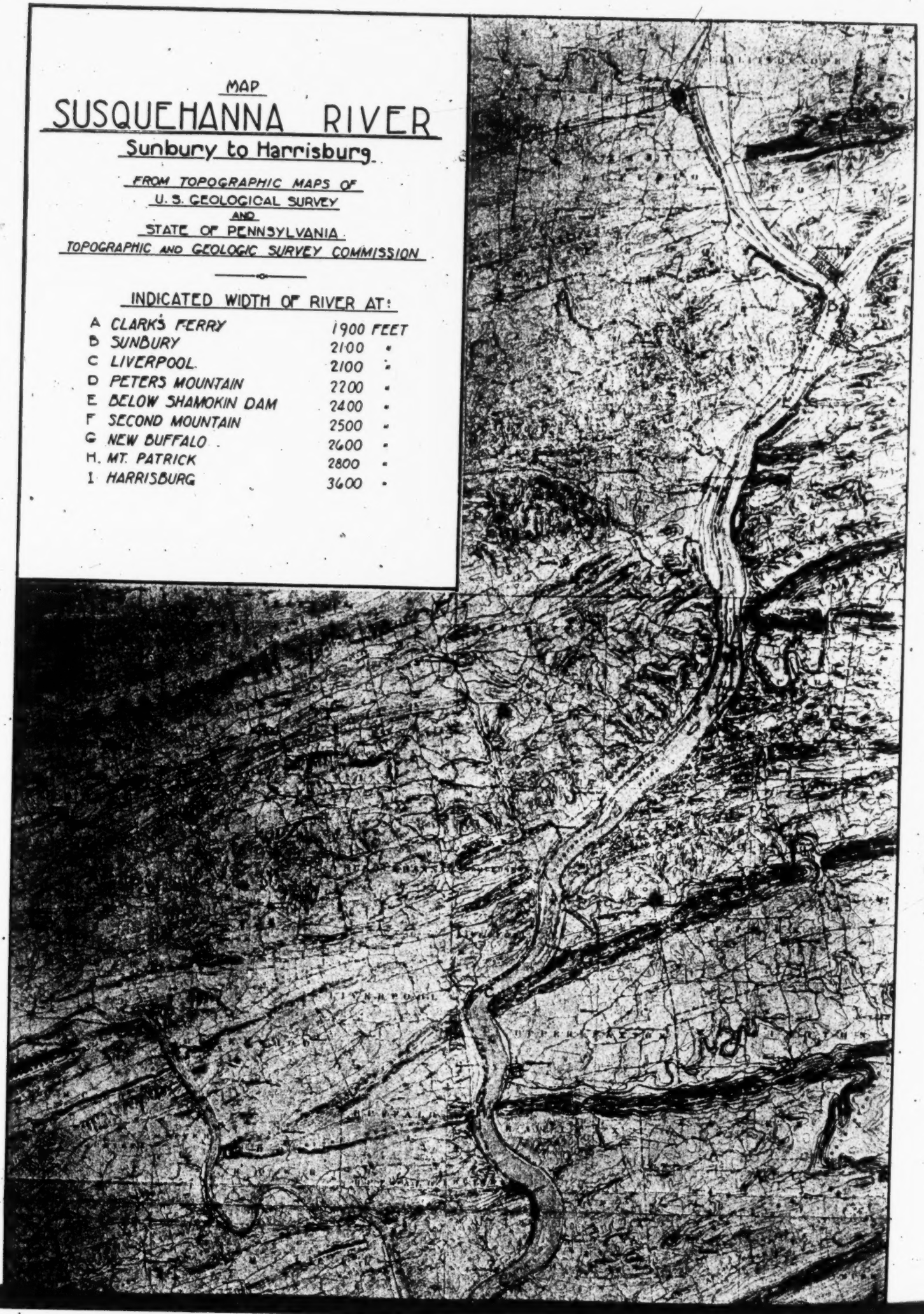
SUSQUEHANNA RIVER

Sunbury to Harrisburg

FROM TOPOGRAPHIC MAPS OF
U. S. GEOLOGICAL SURVEY
AND
STATE OF PENNSYLVANIA
TOPOGRAPHIC AND GEOLOGIC SURVEY COMMISSION

INDICATED WIDTH OF RIVER AT:

A	CLARK'S FERRY	1900 FEET
B	SUNBURY	2100 "
C	LIVERPOOL	2100 "
D	PETERS MOUNTAIN	2200 "
E	BELOW SHAMOKIN DAM	2400 "
F	SECOND MOUNTAIN	2500 "
G	NEW BUFFALO	2600 "
H.	MT. PATRICK	2800 "
I	HARRISBURG	3600 "



Respondent's Exhibit No. 1

(Page 36)

E BELOW SHAMOKIN DAM 2400 '
F SECOND MOUNTAIN 2500 '
G NEW BUFFALO 2600 '
H MT. PATRICK 2800 '
1 HARRISBURG 3600 '

APPENDIX TO RESPONDENT'S EXHIBIT NO. 1

ESTIMATED COST OF COFFERDAMS

Cofferdams were required for:—

2 Abutments
4 Abutment piers
10 Intermediate piers

It was estimated that there would be originally furnished and placed:

(a) Abutment cofferdam which would be moved and re-used for the other abutment.

(b) Abutment pier cofferdams which would be moved and re-used for the other 2 abutment piers.

(c) Intermediate pier cofferdams which would be moved and re-used on the 7 remaining intermediate piers.

It was further estimated that in tearing down and moving a cofferdam from a completed pier or abutment to a new location, the losses would be as follows:

20% of the timber and lumber.

100% of the clay filling used between the inner and outer boxes of the cofferdam.

100% of the labor, the labor of taking up a cofferdam being considered equivalent to the original labor of framing.

On this basis the cost of cofferdams was computed as follows:

Direct Material and Labor:

(Details attached hereto)

1 abutment cofferdam originally constructed	$ 2,454.00
1 abutment cofferdam removed and rebuilt	1,402.00
2 abutment pier cofferdams originally constructed at $2,695.00	5,390.00
2 abutment pier cofferdams removed and rebuilt at $1,513.00	3,026.00
3 intermediate pier cofferdams originally constructed at $2,053.00	6,159.00
7 intermediate pier cofferdams removed and rebuilt at $1,143.00	8,001.00
Total Direct Labor and Material	$ 26,432.00
Indirect Charges:	
Pro rata of general labor allocated to cofferdams for unloading, handling, transporting to place, etc.	6,907.00
Pro rata of general and special plant including consumption thereof or depreciation allocated to the construction of cofferdams	7,516.20
Total	40,855.20
Contractors overhead, contingencies and hazards, 15%	6,128.28
	46,983.48

Contractors profit 10%	4,698.34
Total Estimated Cost of Reproduction New	$ 51,681.82

This item of cofferdams was estimated in the original bids received for the construction of this bridge in 1924, as follows:

Vang Construction Co.	$30,000.00
James McGraw	50,000.00
McLean Construction Co.	40,000.00
Pyramid Construction Co.	46,433.00
Whittaker and Diehl	42,500.00
H. E. Culbertson	50,500.00
Winston & Co.	60,000.00
Waller Construction Co.	57,495.00

DETAILS

(A)

Material and labor for 1 cofferdam for abutment pier, see sketch
(40'0"x56'0" outer box)
(32'0"x48'0" inner box)

	Inner Box (bolted):			
6	10"x10"x48'0" side strips.			
6	10"x10"x32'0" end strips.			
28	10"x10"x4'0" posts.			
9	10"x10"x32'0" cross strips.			
12	10"x10"x14'0" diagonal strips	873' B. M.	65 00	567 65
1440	sq. ft. 3" tongued and grooved sheathing	5200' B. M.	45 00	234 00
	Outer Box (bolted):			
6	10"x10"x56'0"			
6	10"x10"x40'0"			
28	10"x10"x4'0" posts			
42	10"x10"x4'0" braces	7133' B. M.	65 00	463 65
1728	sq. ft. 2" tongued and grooved sheathing	4150' B. M.	42 00	174 30
160	cu. yds. clay fill tamped	160	1 68	268 80

	Labor:				
	Carpenter - building frames	240 hrs.			
	Carpenter and common labor, towing and sinking frames	240 hrs.			
	Carpenter and common labor, setting sheathing	160 hrs.			
	Common labor, clay fill, etc.	240 hrs.			
		880 hrs.	60	528 00	
	Pumping			200 00	
	Maintenance on cofferdam			258 00	2694 40
	(B)				
	Material and labor for 1 cofferdam for intermediate piers:				
	(27'0"x49'0" outer box)				
	(19'0"x37'0" inner box)				
	Inner Box:				
6	10"x10"x38'0"				
6	10"x10"x20'0"				
24	10"x10"x40'0"				
9	10"x10"x20'0"				

12	10″x10″x14′0″	6600′ B. M.	65 00	429 00	
1008	sq. ft. 3″ tongued and grooved sheathing	3626′ B. M.	45 00	163 17	
	Outer Box:				
6	10″x10″x50′0″				
6	10″x10″x28′0″				
24	10″x10″x4′0″	5900′ B.M.	65 00	383 50	
36	10″x10″x4′0″				
1368	sq. ft. 2″ tongued and grooved sheathing	3282′ B. M.	42 00	137 84	
120	cu. yds. clay fill.	120	1 68	201 60	
	Labor	660 hrs.	60	396 00	
	Pumping			175 00	
	Maintenance, etc.			167 00	2053 11
	(C)				
	Cofferdam				
	Abutment				
6	10″x10″x40′0″				
6	10″x10″x30′0″				
28	10″x10″x4′0″				
9	10″x10″x30′0″				

12	10″x10″x14′0″	8080′ B. M.	65 00	525 20	
1260	sq. ft. 3″ tongued and grooved sheathing	4540′ B. M.	45 00	204 30	
6	10″x10″x48′0″				
6	10″x10″x38′0″				
28	10″x10″x4′0″				
42	10″x10″x4′0″	6630′ B. M.	65 00	430 95	
1548	sq. ft. 2″ tongued and grooved sheathing	3720′ B. M.	42 00	156 24	
140	cu. yds. clay fill.	140	1 68	235 20	
	Labor	820 hrs.	60	492 00	
	Pumping			200 00	
	Maintenance			210 00	2453 89
	Cofferdam				
2	abutment piers (same as "A")		2695 00	5390 00	
2	abutment material (same as "A")				
	Figure				
	20% of timber and lumber	288 00			
	100% of clay	268 80			
	100% of labor	528 00			
	(Cost of taking up cofferdam				

	and cost of making frame)			
	Pumping, etc.	200 00		
	Maintenance on dam	228 00		
		1512 80	1513 00	3026 00
3	intermediate piers (same as "B")		2053 00	6159 00
7	intermediate material (same as "B")			
	Figure			
	20% of timber and lumber	203 00		
	100% of clay	201 60		
	100% of labor	396 00		
	Pumping	175 00		
	Maintenance	167 00		
		1142 60	1143 00	8001 00
1	same as "C"			2454 00
1	same as "C"			
	Figure			
	20% of timber and lumber	265 00		
	100% of clay	235 20		

100% of labor	492 00		
Pumping, etc.	200 00		
Maintenance	210 00		
	1402 20	1402 00	26432 00

RECAPITULATION

Direct Labor and Material

Labor:			
C - 1 at	902 00	902 00	
A - 2 at	956 00	1912 00	
B - 3 at	738 00	2214 00	
Moving A - 2 at	956 00	1912 00	
" B - 7 at	738 00	5166 00	
" C - 1 at	902 00	902 00	$13008 00
Material:			
C - 1 at	1552 00	1552 00	
A - 2 at	1739 00	3478 00	
B - 3 at	1315 00	3945 00	
Moved A - 2 at	557 00	1114 00	
" B - 7 at	405 00	2835 00	
" C - 1 at	500 00	500 00	13424 00
			26432 00

RESPONDENT'S EXHIBIT No. 2

TABULATION OF BIDS FOR CLARK'S FERRY BRIDGE

Item 1	Excavation and back fill for abutments and retaining walls.	3300	cu. yds.
Item 2	Filling approaches to grade.	7700	cu. yds.
Item 3	Excavating loose material for pier footings to bed rock.	500	cu. yds.
Item 4	Excavating bed rock for pier footings.	600	cu. yds.
Item 5	Drilling holes and placing dowels in bed rock	500	lin. feet.
Item 6	Concrete Class "A" in pier and abutment footings.	2000	cu. yds.
Item 7	Concrete Class "B" in piers and abutments from top of footing to one foot below springing line	3300	cu. yds.
Item 8	Concrete Class "A" in piers and abutments from one foot below springing line to six feet above springing line	1550	cu. yds.
Item 9	Concrete Class "C" in piers from six feet above springing line to under side of road slab.	1800	cu. yds.
Item 10	Concrete Class "A" in arch rings, retaining walls, abutment spandrel walls, arch ring saddles, roadway, curbs, cross walls and road slab.	9510	cu. yds.
Item 11	Concrete Class "A" in lamp standards, hand railing posts and sidewalk	700	cu. yds.
Item 12	Macadam surfacing on approaches	2000	sq. yds.
Item 13	Waterproofing backs of retaining walls and abutments.	12150	sq. ft.
Item 14	Elastite for expansion joints in place	4140	sq. ft.
Item 15	Zinc plates for expansion joints in place	16000	pounds
Item 16	Lighting conduit in railing in place	4500	lin. ft.
Item 17	Reinforcing steel in place	904000	pounds
Item 18	Temporary cable highway fencing.	630	lin. ft.
Item 19	C. I. drain inlets in place.	40	Inlets
Item 20	Necessary coffer dams, for piers and abutments, installed complete including maintenance and pumping	Lump Sum	

	Whiting and Turner Baltimore, Md.		McClean Contracting Co. Baltimore, Md.		Smith and McCormick Easton, Pa.		Gannet, Seeley & Fleming Harrisburg		Pyramid Const. Co. Harrisburg		Whittaker and Diehl Harrisburg		H. E. Culbertson Cleveland		Winston & Co., Inc. Richmond, Va.		Walter Rea Pittsburg	
	Unit	Total	Unit	Total	Unit	Total	Unit	Total	Unit	Total	Unit	Total	Unit	Total	Unit	Total	Unit	Total
Item 1			3.90	12,870.00					4.14	13,662.00	2.00	6,600.00	5.00	16,500.00	3.00	9,900.00	3.00	9,900.00
Item 2			1.35	10,395.00					1.98	15,246.00	2.00	15,400.00	2.00	15,400.00	1.50	11,550.00	1.30	10,010.00
Item 3			5.25	2,625.00					5.42	2,710.00	2.50	1,250.00	5.00	2,500.00	4.00	2,000.00	.50	250.00
Item 4			13.50	8,100.00					10.47	6,282.00	6.00	3,600.00	7.35	4,410.00	8.00	4,800.00	4.00	2,400.00
Item 5			2.65	1,325.00					1.42	710.00	1.00	500.00	2.00	1,000.00	3.00	1,500.00	2.00	1,000.00
Item 6			18.25	36,500.00					22.05	44,100.00	20.00	40,000.00	19.50	39,000.00	25.00	50,000.00	17.00	34,000.00
Item 7			17.00	56,100.00					20.36	67,188.00	22.00	72,600.00	19.60	64,680.00	25.00	82,500.00	17.00	56,100.00
Item 8			18.50	28,675.00					24.00	37,200.00	24.00	37,200.00	21.10	32,705.00	25.00	38,750.00	17.00	26,350.00
Item 9			15.00	27,000.00					21.50	38,700.00	18.00	32,400.00	19.00	34,200.00	20.00	36,000.00	17.00	30,600.00
Item 10			30.00	285,300.00					27.00	256,770.00	28.00	266,280.00	26.90	255,819.00	33.50	318,585.00	32.00	304,324.00
Item 11			35.00	24,500.00					30.86	21,602.00	40.00	28,000.00	32.00	22,400.00	35.00	24,800.00	32.00	22,400.00
Item 12			3.20	6,400.00					4.00	8,000.00	2.00	4,000.00	2.75	5,500.00	3.00	6,000.00	4.70	9,400.00
Item 13			.08	972.00					.20	2,430.00	.05	607.50	.15	1,822.50	.05	607.50	.05	607.50
Item 14			.60	2,484.00	NO BID		NO BID		.28	1,162.00	.38	1,573.20	.15	621.00	.30	1,242.00	.30	1,242.00
Item 15			.28	4,480.00					.28	4,480.00	.15	2,400.00	.15	2,400.00	.30	4,800.00	.15	2,400.00
Item 16			.45	2,025.00					.19	855.00	.30	1,350.00	.12	540.00	.15	675.00	.10	450.00
Item 17			.055	49,720.00					.055	49,720.00	.045	40,680.00	.06	54,240.00	.06	54,240.00	.07	63,280.00
Item 18			1.20	756.00					1.00	630.00	2.00	1,260.00	1.25	787.50	.80	504.00	1.25	787.50
Item 19			75.00	3,000.00					28.00	1,120.00	40.00	1,600.00	25.00	1,000.00	20.00	800.00	55.00	2,200.00
Item 20				40,000.00						46,433.00		42,500.00		50,500.00		60,000.00		57,495.00
Total Bid				603,227.00						619,000.00		599,800.70		606,015.00		708,953.50		635,192.00

RESPONDENT'S EXHIBIT No. 2

TABULATION OF BIDS FOR CLARK'S FERRY BRIDGE

			S. W. Shoemaker & Son Harrisburg		James McGraw Philadelphia		The Vang Const. Co. Cumberland, Md.	
			Unit	Total	Unit	Total	Unit	Total
taining walls.	3300	cu. yds.			4.00	13,200.00	2.00	6,600.00
	7700	cu. yds.			2.00	15,400.00	1.50	11,550.00
ed rock.	500	cu. yds.			10.00	5,000.00	3.00	1,500.00
	600	cu. yds.			12.00	7,200.00	9.00	5,400.00
ck	500	lin. feet.			3.00	1,500.00	2.00	1,000.00
tings.	2000	cu. yds.			20.00	40,000.00	16.00	32,000.00
m top of footing to one foot below springing line	3300	cu. yds.			20.00	66,000.00	16.00	52,800.00
m one foot below springing line to six feet above springing line	1550	cu. yds.			20.00	31,000.00	16.00	24,800.00
ve springing line to under side of road ab.	1800	cu. yds.			20.00	36,000.00	16.00	28,800.00
alls, abutment spandrel walls, arch ring saddles, roadway curbs, cross walls and road slab.	9510	cu. yds.			25.00	237,750.00	24.00	228,240.00
ling posts and sidewalk	700	cu. yds.			50.00	35,000.00	26.00	18,200.00
	2000	sq. yds.			2.50	5,000.00	3.00	6,000.00
atments.	12150	sq. ft.			.15	1,822.50	.06	729.00
	4140	sq. ft.	NO BID		.75	3,105.00	.60	2,484.00
	16000	pounds			.25	4,000.00	.25	4,000.00
	4500	lin. ft.			.50	2,250.00	.25	1,125.00
	904000	pounds			.07	63,280.00	.0475	42,940.00
	630	lin. ft.			2.00	1,260.00	.60	378.00
	40	Inlets			100.00	4,000.00	75.00	3,000.00
e, installed complete including maintenance and pumping	Lump	Sum				50,000.00		30,000.00
		Total Bid				622,767.50		501,546.00

Gannet, Seeley & Fleming Harrisburg		Pyramid Const. Co. Harrisburg		Whittaker and Diehl Harrisburg		H. E. Culbertson Cleveland		Winston & Co., Inc. Richmond, Va.		Walter Rea Pittsburg		F. J. Parker, Inc. Philadelphia	
Unit	Total	Unit	Total	Unit	Total	Unit	Total	Unit	Total	Unit	Total	Unit	Total
		4.14	13,662.00	2.00	6,600.00	5.00	16,500.00	3.00	9,900.00	3.00	9,900.00		
		1.98	15,246.00	2.00	15,400.00	2.00	15,400.00	1.50	11,550.00	1.30	10,010.00		
		5.42	2,710.00	2.50	1,250.00	5.00	2,500.00	4.00	2,000.00	.50	250.00		
		10.47	6,282.00	6.00	3,600.00	7.35	4,410.00	8.00	4,800.00	4.00	2,400.00		
		1.42	710.00	1.00	500.00	2.00	1,000.00	3.00	1,500.00	2.00	1,000.00		
		22.05	44,100.00	20.00	40,000.00	19.50	39,000.00	25.00	50,000.00	17.00	34,000.00		
		20.36	67,188.00	22.00	72,600.00	19.60	64,680.00	25.00	82,500.00	17.00	56,100.00		
		24.00	37,200.00	24.00	37,200.00	21.10	32,705.00	25.00	38,750.00	17.00	26,350.00		
		21.50	38,700.00	18.00	32,400.00	19.00	34,200.00	20.00	36,000.00	17.00	30,600.00		
		27.00	256,770.00	28.00	266,280.00	26.90	255,819.00	33.50	318,585.00	32.00	304,324.00		
		30.86	21,602.00	40.00	28,000.00	32.00	22,400.00	35.00	24,800.00	32.00	22,400.00		
		4.00	8,000.00	2.00	4,000.00	2.75	5,500.00	3.00	6,000.00	4.70	9,400.00		
		.20	2,430.00	.05	607.50	.15	1,822.50	.05	607.50	.05	607.50		
NO BID		.28	1,162.00	.38	1,573.20	.15	621.00	.30	1,242.00	.30	1,242.00	NO BID	
		.28	4,480.00	.15	2,400.00	.15	2,400.00	.30	4,800.00	.15	2,400.00		
		.19	855.00	.30	1,350.00	.12	540.00	.15	675.00	.10	450.00		
		.055	49,720.00	.045	40,680.00	.06	54,240.00	.06	54,240.00	.07	63,280.00		
		1.00	630.00	2.00	1,260.00	1.25	787.50	.80	504.00	1.25	787.50		
		28.00	1,120.00	40.00	1,600.00	25.00	1,000.00	20.00	800.00	55.00	2,200.00		
			46,433.00		42,500.00		50,500.00		60,000.00		57,495.00		
			619,000.00		599,800.70		606,015.00		708,953.50		635,192.00		

Successful Bidder—Vang Construc. Co.
Clarks Ferry Bridge Bids.
F. M. Masters, Consulting Engineer,
Harrisburg, Pa.

RESPONDENT'S EXHIBIT NO. 3

REPORT OF MORRIS KNOWLES, INC.,
ON SURVEY OF TRAFFIC OVER THE CLARK'S FERRY
BRIDGE, CLARK'S FERRY, PA.
March, 1930

Including Supplementary Report Dated May 6, 1930

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March 10, 1930.

The Clarks Ferry Bridge Company,
Duncannon, Pennsylvania.

Gentlemen:

We submit herewith the results of our studies made for the purpose of determining the probable traffic to be anticipated over the Clarks Ferry Bridge during the next several years.

As a basis for the survey, we have had avail-

able records of the traffic crossing the bridge during the past five years or from 1925 to 1929, inclusive, as obtained from the records of the Clarks Ferry Bridge Company; records of traffic upon the tributary highways from the state wide survey of the State Highway Department and the U. S. Bureau of Roads during 1923 and 1924, together with the Highway Department's estimates of future traffic movement based upon such survey; specific counts made in connection with this investigation, on March 4, 1930, which determined the volume of traffic and the origin, destination and highway route used by each vehicle crossing the bridge between the hours of 7 a. m. and 6 p. m.; and various other data to which reference is made in the body of the accompanying report.

The estimates of traffic for each year from 1930 to 1935, inclusive, have been summarized in Table 14 of the report. Such estimates are given first on the basis of existing highways in the vicinity of the bridge remaining unchanged as to route and improvement; and adjustments then made according to the effect which would result from the improvement of certain highways as indicated. The maximum traffic as shown by the forecast would range from 1,110,600 vehicles in 1930 to 1,292,100 in 1935; and the minimum from 490,000 in 1930 to 560,630 in 1935.

By applying the present toll rates to these forecasts of future traffic, estimates have been made of the gross revenue which would result under each one of the conditions as listed. The maximum to be anticipated ranges from $117,500 in 1930 to $136,-

000 in 1935; and the minimum from $51,500 in 1930 to $59,000 in 1935.

Respectfully submitted,
Morris Knowles, Incorporated
Per Wilfred Jupenlaz

(Page 1)

Report on Survey of Traffic over the Clarks Ferry Bridge, Clarks Ferry, Pa.

Purpose of Investigation:

The Clarks Ferry Bridge crosses the Susquehanna River approximately 14 miles north of Harrisburg, Pennsylvania. It is an important link in heavy traffic routes extending across the state. The purpose of this investigation has been to determine the probable traffic crossing the bridge during each of the next five years, namely, 1930 to 1935, inclusive. Consideration has been given to the probable construction or reconstruction of highways in the vicinity; and the effect of these improvements upon future traffic over the bridge.

Estimates also have been made of annual gross revenues, on the basis of the present rates of toll collected at the bridge and the forecasts of probable future traffic.

Records Available:

Records of travel over the bridge during the past five years are available. There also are records of traffic counts made by the State Department of Highways in 1923 and 1924, in cooperation with the United States Bureau of Public Roads; together with the summaries and conclusions of the State Department in regard to probable future increase

in traffic on major routes of the State Highway system.

Records of travel over the Clarks Ferry Bridge have been summarized in Table 1. The total traffic given for each month includes passenger automobiles, trucks and busses. A very small proportion of the vehicles crossing the bridge, approxi

(Page 2)

mately 5 percent, are charged at monthly rates, and no exact record of the number of trips made by these has been kept. The results given in Table 1 include an allowance of 60 crossings per month, for each monthly ticket sold. This is a reasonable allowance, considering the nature of the traffic utilizing the monthly rates, but even if high or low, its effect upon the total would be slight.

Method of Approach to the Problem:

The total travel of motor vehicles across the bridge increased approximately 110 percent from 1925 to 1929. During this time, the registration of automobiles in the State of Pennsylvania increased approximately 30 percent. The construction of hard surface roads and the increasing use of motor cars, throughout the state, have been responsible for the extremely rapid growth in traffic over the bridge. It is at once apparent that such rate will not continue indefinitely in the future, but will eventually approximate more closely the rate of increase in population of the state.

A study has been made of the areas which contribute traffic to the bridge, the proportion and amount contributed by each and the probable future growth in traffic from each. Present and probable

future routes, and alternate routes, between these sections have been given consideration and the effect of each one determined.

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Traffic Counts Made on March 4, 1930:

A study has been made of the origin and destination of all passenger automobiles, trucks and busses, crossing the Clarks Ferry Bridge between 7 A. M. and 6 P. M. on March 4, 1930. This data was obtained by two observers employed for this purpose, who were stationed at the bridge. They determined, by inquiry from the driver, the place from which the trip was started and the destination; and also information in regard to the route used where alternate routes are available.

These data have been analyzed and tabulated in such a way as to show the interchange of traffic between different areas and different routes. The results are shown on Tables 2 and 3, the first table giving "local" traffic and the second "through" traffic. For the purpose of this study, through traffic was defined as that which originated more than 50 miles by improved highway from the Clarks Ferry Bridge and also was destined for points more than 50 miles by improved highway from the bridge. The through traffic amounted to 232, or 20 percent of the total; and local traffic, 946 or 80 percent of the total. A summary of the traffic, by 15 minute periods, is given on Table 4.

In addition to the counts of traffic made on the Clarks Ferry Bridge, on March 4, 1930, counts also were made on Route 5, just south of Duncannon; on

Route 209 east of Millersburg; on Route 11 just north of the Harrisburg city limits; on Route 33 just south of Meeks Corner; on Route 274 just

(Page 4)

west of the Borough of New Bloomfield; on Route 22 just east of Millerstown; and on Route 11 at Mt. Patrick, which is a short distance south of Liverpool. The license numbers of automobiles, trucks and busses passing the Mt. Patrick, Millerstown and Meeks Corner stations were taken, which data made it possible to determine the interchange of traffic between these routes.

The location of these stations, together with those used by the State Highway Department in their traffic survey of 1924, are shown on Plate I. Summaries of the traffic counted are given as Tables 5 to 11 inclusive.

Estimates of the total volume of traffic on each of the routes at which counts were taken, for the year, 1930, have been made by applying the proper ratio to allow for hourly, daily and seasonal variations. The results are given in Table 12, together with results of counts made by the State Department of Highways in 1923 and 1924, and the estimates of the State Department for the year 1930. The latter were based upon the 1924 counts and, as will be seen by inspection, are much lower than the actual 1930 traffic as was determined from the count made on March 4th and adjusted for the year. It is apparent from these results that the increase in traffic in the vicinity of Clarks Ferry from 1924 to 1930 has been much greater than should normally

be expected. This is due to the fact that the 1924 traffic was abnormally low on account of the lack of needed highway connections and improvements. As an illustration, the major highway improvements in eastern Pennsylvania from 1925 to 1930 are shown on Plate II.

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Normal Traffic, 1929:

Inspection of the records of total annual traffic over the bridge during the past five years indicates that the year 1928 may be considered as an abnormally low year and 1929 as abnormally high. This was largely due, in the first instance, to highway construction in progress between Harrisburg and the bridge, on the east bank of the river, making it inconvenient to use this route; and in the second instance, to the road construction on the west side of the river near Perdix, which diverted across the bridge a part of the traffic which normally would use this route instead.

In order to arrive at a normal figure for total traffic across the bridge in 1929, it is necessary to make an allowance for the traffic diverted by the road construction near Perdix. For this reason a count of the total traffic on Route 5, just south of the Duncannon borough line, was made on March 4, 1930. A total of 365 automobiles, trucks and busses was recorded from 7 A. M. to 6 P. M. This would amount to 400,000 vehicles per year, making due allowance for 24-hour instead of 11-hour traffic; for the fact that the count was made on a Tuesday, which is somewhat lower than the average day of the week; and for the seasonal variation of traffic.

The 11-hour traffic was estimated to be 78 percent of the 24-hour traffic; the Tuesday traffic to be 85 percent of the average day of the week; and the traffic in February and March to be 50 percent of that during the average month of the year. Plate III. shows the hourly, daily and seasonal variations of traffic.

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The 1930 traffic over Route 5 was reduced 5 percent to give the normal 1929 traffic, and the latter figure further reduced so as to obtain the normal traffic over Route 5 during the first nine months, which was approximately the portion of the year prior to completion of the highway north of Perdix. It was then estimated that approximately 30 percent of this traffic was diverted across the Clarks Ferry Bridge, on account of the inconvenience resulting from the construction operations. This figure, subtracted from the total of 1,096,927 vehicles across the Clarks Ferry Bridge in 1929, gives a total of 1,008,427 vehicles as the normal traffic over the bridge for that year.

Distribution of Traffic over Bridge in 1929:

The total normal traffic over the bridge in 1929, amounting to 1,008,427 vehicles, has been subdivided according to origin and destination and is shown on Tables 2 and 3, previously mentioned, making allowance for the fact that through traffic may comprise a larger proportion of the total traffic when taken for the whole year, than it did on March 4th, when the count was made on the bridge.

Total Local Traffic, 1929:

A curve showing the typical seasonal variation of

local traffic is shown on Plate IV. It will be noted that this curve does not fluctuate so greatly as the curve showing total traffic over the Clarks Ferry Bridge in the year 1929. It follows more closely the curve showing the seasonal variation of truck and bus traffic over the bridge.

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On March 4, 1930, the local traffic was found to comprise 80 percent of the total. The traffic for the same time of the year in 1929 amounted to 55,150 vehicles per month. The local traffic in 1929, for a period of one month at that season of the year, is estimated to have been 80 percent of 55,150, or 44,300 vehicles. It will be noted from inspection of the curve on Plate IV. that the monthly local traffic, for a period midway between the points marked February and March, amounts to 72 percent of the average month during the whole year. The average local traffic during 1929, therefore, is estimated to have been 44,300 divided by 72 percent, or 61,500 vehicles. This multiplied by 12, gives a total of 738,000 vehicles, as the local traffic for the year. The percentage of total traffic for the year which was local, is 738,000 divided by 1,096,927, or 67.3 percent. The normal local traffic for 1929 is 67.3 percent of 1,008,427 or 678,400.

Interchange of Traffic—1929:

The normal local traffic in 1929 has been distributed among the different classifications as to origin and destination, as shown on Table 2, according to the ratios secured in the count of March 4, 1930. In a similar way, the total through traffic has been dis-

tributed as shown on Table 3. Although the proportion of local to through traffic varies at different seasons of the year, it is unlikely that there is any considerable variation in the proportion carried by different routes. It is true that at this season of the year the northbound traffic is somewhat high, as compared with the southbound, but the figures given in the tables represent total interchange in both directions.

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Future Increase in Population and Automobile Registration:

A study has been made of the probable future increase in population and automobile registration for areas within 100 miles, by improved highway, and tributary to Clarks Ferry Bridge. The location of these areas is shown on Plate V. and the estimates of future increase in population and registration are given on Table 13. It will be noted that the estimated increase in automobile registration for the entire area within 100 miles, for the period 1929 to 1935, is 32 percent. This is slightly higher than the estimate of 30 percent, for the same period, made by the Pennsylvania Department of Highways for the entire State of Pennsylvania.

The population has been estimated by assuming a uniform, arithmetical increase from 1920, according to the official United States Census figures for 1910 and 1920. The ratios which have been used to give the number of motor vehicles per 1,000 population in 1929 and 1935 have been computed for each of the sections considered, utilizing estimates

of the Pennsylvania Department of Highways for the counties included, and weighing the State figures according to the populations in the different counties.

Estimates of Future Traffic with No Changes in Tributary Highways:

In the future, traffic may be expected to increase at approximately the same rate as the automobile registration for the areas where such traffic originates or is destined. The normal local traffic across the bridge in 1929 has been increased, therefore, by percentages which represent the probable increase

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in registration in the sections which contribute the particular portion of the total traffic being considered. The method used in this computation, the percentages of increase, and the estimated interchange of local traffic between different sections and routes is shown on Table 2.

A similar computation for the through traffic is given on Table 3. In arriving at the proper percentages of increase to use for figures in this latter table, consideration has been given to the proportion of the through travel originating or destined to points between 50 and 100 miles from the bridge; points in Pennsylvania more than 100 miles from the bridge; and points in other states. Giving due weight to the probable future rate of increase in automobile registration for these different areas, and the proportion of the total through traffic contributed by each, it is estimated that an increase of 35 percent in through traffic might normally be ex-

pected at the Clarks Ferry Bridge between 1929 and 1935, assuming no changes in surrounding highways.

Effect of Route 33 Between Newport and Gettysburg:

It has been found, from the traffic counts made on March 4, 1930, that approximately 75 percent of the cars enroute from Carlisle, Gettysburg and points south, to points on the William Penn Highway or Susquehanna Trail beyond Millerstown or Mt. Patrick, crossed the Clarks Ferry Bridge and 25 percent took Route 33 by way of Meeks Corner. Considering the fact that the Route 33 is shorter, it is reasonable to assume that a certain portion of this traffic which crossed the Clarks Ferry Bridge,

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did so because of a lack of knowledge of or unfamiliarity with the other route; the unattractiveness of the Newport Bridge; or the fact that most automobile maps and guides have emphasized the Clarks Ferry route. As travelers learn more about the other route, and with the construction of a new bridge at Newport, there probably will be some diversion of traffic from the Clarks Ferry Bridge. The amount of this diversion is problematical but may range from 10 to 20 percent. These percentages have been applied to those portions of the estimated 1935 traffic originating or destined to Route 11 or 22 respectively, and the total has been reduced accordingly. The amount of such reduction is from 1,319,450 to 1,292,100.

Estimates of Future Traffic:

A curve showing the probable increase in traffic,

from the normal total amount for 1929 to that estimated for 1935, is given on Plate VI. This curve when extended back through the previous years, follows the observed data closely, provided that allowance is made for the fact that 1928 was abnormally low, for the reasons previously mentioned.

The curve rises at a decreasing rate in the future, as would be expected, considering the fact that the primary highway system of the State is now practically completed. The great increase in traffic during the past five years as a result of the paving of State routes tributary to the bridge, may not be expected to continue.

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Future Traffic, with Certain Highway Improvements Made:

While highway construction during the past five years has increased the traffic over the Clarks Ferry Bridge, the system is now almost completely improved, and those additional links which have been proposed will divert a considerable portion of traffic from the bridge. A detailed study has been made of the effect of each of these improvements, by analyzing the interchange of traffic between two given routes and determining how this interchange will be altered by the construction of the specific improvement. A summary giving the estimated traffic during the next five years, assuming certain of these improvements or combinations of them are effected, is given in Table 14. A description of each one follows.

Route 5—Kinkora Heights to Duncannon Borough:

This project has been scheduled for construction

during the year 1930. It will be an additional attraction for traffic between New Bloomfield, Duncannon and vicinity, and Harrisburg and the east. Some of this traffic now uses the Clarks Ferry Bridge. A detailed analysis has been made of the amount of traffic over the Clarks Ferry Bridge which will actually be affected by this improvement, based on the figures for future interchange of traffic given on Tables 2 and 3. The results are shown on Plate VI, and Table 14.

Route 14 Sunbury to Millersburg:

Surveys have been made and plans prepared for improvement of this route. Its completion will have an important effect on the traffic across the Clarks Ferry Bridge, as shown by Table 14 and Plate VI. The route will take a large percentage of the traffic

(Page 12)

between Sunbury and Harrisburg and a considerable portion of the traffic which now utilizes the Clarks Ferry Bridge and the Susquehanna Trail on the west bank of the River.

Route 5 Duncannon to Lemoyne:

At the present time this route is relatively unattractive to traffic, not only on account of the large proportion of only fair macadam surface, but also because of the circuitous route through Marysville and the points of congestion farther south. It is apparent that the relocation of the highway at Marysville and the construction of a first class pavement, for those sections which are now macadam, will attract a considerable proportion of the traffic which now crosses the Clarks Ferry Bridge. A de-

tailed analysis has been made of the volumes of traffic now crossing the Clarks Ferry Bridge which would probably be diverted by the complete improvement of Route 5 from Duncannon to Lemoyne, and the results are given on Table 14 and Plate VI.

New Bridge in Vicinity of Millersburg or Liverpool:

Consideration has been given at various times to construction of a bridge across the Susquehanna River in the vicinity of Millersburg or Liverpool. Such a bridge would divert a considerable portion of the traffic now crossing the bridge at Clarks Ferry, particularly that traffic originating or destined to Route 209. The effect of the construction of the new bridge is shown on the table and graphically on Plate VI.

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Combinations of Certain Probable Highway Improvements:

If any two of the improvements referred to are constructed, the diversion of traffic from the Clarks Ferry Bridge for the two combined will be somewhat less than the sum of the diversion caused by each one alone. A study has been made of the effect upon future traffic over the bridge by (1) the paving of Route 5 from Kinkora Heights to Duncannon and also the completion of Route 14 from Sunbury to Millersburg; (2) the complete improvement of Route 5 from Duncannon to Lemoyne and also Route 14 from Sunbury to Millersburg; (3) complete improvement of Route 5 from Duncannon to Lemoyne, together with improvement of Route 14 from Sunbury to Millersburg and also construc-

tion of a new bridge near Millersburg. The results of the combination of these improvements upon probable future traffic over the Clarks Ferry Bridge are shown on Table 14 and Plate VI.

Estimates of Gross Revenue:

In order to express the estimates of future traffic in terms of gross revenue, the total amount of toll which would have been collected at the Clarks Ferry Bridge during 1929, if the present rates had applied throughout the year, has been divided by the total number of passenger automobiles, trucks and busses crossing the bridge during the year. This gives a factor of $.1052 per vehicle. This factor has been applied to the estimates of future traffic under the various conditions which have been outlined. The results have been summarized in Table 15, which gives the estimated gross revenue under the present schedule of tolls.

TABLE 1

(Page 14)

TRAFFIC OVER CLARK'S FERRY BRIDGE, BY MONTHS, 1925-1929, PASSENGER AUTOMOBILES, TRUCKS AND BUSSES

Month	1925 Passenger Autos	1925 Trucks and Busses	1925 Total	1926 Passenger Autos	1926 Trucks and Busses	1926 Total	1927 Passenger Autos	1927 Trucks and Busses	1927 Total
Jan.	8,824	1,314	10,138	18,087	2,159	20,246	21,392	2,095	23,487
Feb.	11,039	1,427	12,466	12,061	1,724	13,785	21,010	2,238	23,248
Mar.	22,062	1,954	24,016	24,732	2,559	27,291	38,068	3,199	41,267
Apr.	30,680	2,394	33,074	36,779	2,839	39,618	49,397	3,415	52,812
May	44,966	2,051	47,017	56,283	3,137	59,420	67,888	3,438	71,326
June	50,872	2,693	53,565	60,008	2,921	62,929	69,916	3,624	73,540
July	66,400	3,316	69,716	84,965	3,279	88,244	97,800	3,241	101,041
August	80,858	2,401	83,259	92,865	3,748	96,613	96,695	3,768	100,463
Sept.	65,406	2,425	67,831	79,030	3,659	82,689	83,499	3,725	87,224
Oct.	44,908	2,989	47,897	56,919	3,257	60,176	66,448	5,176	71,624
Nov.	41,327	2,178	43,505	48,301	3,045	51,346	58,239	2,965	61,224
Dec.	28,193	2,284	30,477	30,627	2,852	33,479	41,169	2,745	43,914
Total	495,535	27,426	522,961	600,657	35,179	635,836	711,521	39,649	751,170
Average		2,285	43,580		2,932	52,986		3,304	62,597

Month	1928 Passenger Autos	1928 Trucks and Busses	1928 Total	1929 Passenger Autos	1929 Trucks and Busses	1929 Total
Jan.	34,952	2,567	37,519	39,189	3,606	42,795
Feb.	32,569	2,866	35,435	38,685	3,515	42,200
Mar.	41,134	3,681	44,815	63,771	4,321	68,092
Apr.	56,749	3,602	60,351	71,638	5,230	76,868
May	67,661	4,303	71,964	89,061	6,524	95,585
June	79,890	4,296	84,186	107,963	6,333	114,296
July	96,529	3,954	100,483	131,437	6,929	138,366
August	88,276	4,222	92,498	143,365	7,080	150,445
Sept.	87,416	4,119	91,535	116,420	5,990	122,410
Oct.	79,214	4,247	83,461	92,776	6,399	99,175
Nov.	67,350	3,699	71,049	75,083	4,972	80,055
Dec.	56,880	3,366	60,246	61,642	4,998	66,640
Total	788,620	44,922	833,542	1,031,030	65,897	1,096,927
Average		3,744	69,462		5,491	91,411

NOTE: Tabulation includes trips made by cars using monthly rates, allowing 60 trips for each monthly ticket sold.

TABLE 2
(Page 15)

ORIGIN AND DESTINATION OF AUTOMOBILE, TRUCK AND BUS TRAFFIC USING CLARK'S FERRY BRIDGE

Local Traffic Only*

			Between Clark's Ferry Bridge and Harrisburg	Harrisburg	East of Harrisburg	South of Harrisburgh but North of Dillsburg	South of Dillsburg	Route 209	Totals
Between Mecks Corner and Clark's Ferry Bridge via Duncannon	(a)	Count of March 4, 1930	19	110	3	0	0	7	139
	(b)	Probable Annual—1929	13,600	78,900	2,200	Negligible	Negligible	5,000	99,700
		% Increase 1929 to 1935	30%	30%	30%	—	—	30%	—
	(c)	Probable Annual—1935	17,700	102,600	2,900	Negligible	Negligible	6,500	129,700
West of Mecks Corner	(a)	Count of March 4, 1930	2	52	4	2	0	6	66
	(b)	Probable Annual—1929	1,400	37,300	2,900	1,400	Negligible	4,300	47,300
		% Increase 1929 to 1935	25%	25%	25%	25%	—	25%	—
	(c)	Probable Annual—1935	1,800	46,600	3,600	1,800	Negligible	5,400	59,200
South of Duncannon	(a)	Count of March 4, 1930	0	22	0	0	1	16	39
	(b)	Probable Annual—1929	Negligible	15,800	Negligible	Negligible	700	11,500	28,000
		% Increase 1929 to 1935	—	30%	—	—	30%	30%	—
	(c)	Probable Annual—1935	Negligible	20,600	Negligible	Negligible	900	15,000	36,500
Route No. 22 — Between Clark's Ferry Bridge and South of Newport	(a)	Count of March 4, 1930	4	11	0	1	1	5	22
	(b)	Probable Annual—1929	2,900	7,900	Negligible	700	700	3,600	15,800
		% Increase 1929 to 1935	25%	25%	—	25%	25%	25%	—
	(c)	Probable Annual—1935	3,600	9,900	Negligible	900	900	4,500	19,800
Route No. 22—Newport and Points North of Newport	(a)	Count of March 4, 1930	0	236	51	2	12	21	322
	(b)	Probable Annual—1929	Negligible	169,100	36,600	1,400	8,600	15,100	230,800
		% Increase 1929 to 1935	—	28%	28%	28%	28%	28%	—
	(c)	Probable Annual—1935	Negligible	216,500	46,900	1,800	11,000	19,300	295,500
Route No. 11 — Between Clark's Ferry Bridge and South of Northumberland	(a)	Count of March 4, 1930	5	66	4	0	3	13	91
	(b)	Probable Annual—1929	3,600	47,300	2,900	Negligible	2,200	9,300	65,300
		% Increase 1929 to 1935	30%	30%	30%	—	30%	30%	—
	(c)	Probable Annual—1935	4,700	61,600	3,800	Negligible	2,900	12,100	85,100
Route No. 11—Sunbury, Shamokin and Vicinity	(a)	Count of March 4, 1930	0	70	26	0	8	4	108
	(b)	Probable Annual—1929	Negligible	50,200	18,600	Negligible	5,700	2,900	77,400
		% Increase 1929 to 1935	—	30%	30%	—	30%	30%	—
	(c)	Probable Annual—1935	Negligible	65,400	24,200	Negligible	7,400	3,800	100,800
Route No. 11—Points North and Northeast of Northumberland	(a)	Count of March 4, 1930	0	121	23	4	8	3	159
	(b)	Probable Annual—1929	Negligible	86,800	16,500	2,900	5,700	2,200	114,100
		%Increase 1929 to 1935	—	35%	35%	35%	35%	35%	—
	(c)	Probable Annual—1935	Negligible	117,200	22,300	3,900	7,700	3,000	154,100
Totals	(a)	Count of March 4, 1930	30	688	111	9	33	75	946
	(b)	Probable Annual—1929	21,500	493,300	79,700	6,400	23,600	53,900	678,400
	(c)	Probable Annual—1935	27,800	640,400	103,700	8,400	30,800	69,600	880,700

*Traffic is considered local where its origin or destination or both are within a distance of 50 miles by improved highway from Clark's Ferry Bridge.

NOTE: The estimated distribution of traffic for 1929 and 1935 as shown on this table is proportioned according to the results determined from traffic count of March 4, 1930

TABLE 3

(Page 16)

ORIGIN AND DESTINATION OF AUTOMOBILE, TRUCK AND BUS TRAFFIC USING CLARK'S FERRY BRIDGE—THROUGH TRAFFIC ONLY*

NOTE: The estimated distribution of traffic for 1929 and 1935, as shown on this table, is proportioned according to the results determined by traffic count of March 4, 1930.

			Points 50 Miles or More by Highway and South and Southwest of Clark's Ferry Bridge (West of Susquehanna River)	Points 50 Miles or More by Highway and East and Southeast of Clark's Ferry Bridge (East of Susquehanna River)	Points 50 Miles or More by Highway from Clark's Ferry Bridge along U. S. Route No. 209	Total
Route No. 11	(a)	Count of March 4, 1930	83	51	0	134
	(b)	Probable Annual—1929	118,000	72,600	Negligible	190,600
		% Increase 1929 to 1935	35%	35%	—	35%
	(c)	Probable Annual—1935	159,400	98,100	Negligible	257,500
Route No. 22	(a)	Count of March 4, 1930	18	79	1	98
	(b)	Probable Annual—1929	25,600	112,300	1,420	139,320
		% Increase 1929 to 1935	30%	30%	30%	30%
	(c)	Probable Annual—1935	33,300	146,100	1,850	181,250
Total	(a)	Count of March 4, 1930	101	130	1	232
	(b)	Probable Annual—1929	143,600	184,900	1,420	329,920
	(c)	Probable Annual—1935	192,900	244,200	1,850	438,750

*Traffic is considered through if its origin and destination are both a distance of 50 miles or more by highway from Clark's Ferry Bridge.

TABLE 4
(Page 17)

Volume of Automobile Traffic
March 4, 1930
TRAFFIC ACROSS CLARK'S FERRY BRIDGE
7 A. M. to 6 P. M.

Time	Eastbound and Southbound Traffic			Westbound and Northbound Traffic			Total Both Directions
	Pass. Autos	Trucks and Busses	Total	Pass. Autos	Trucks and Busses	Total	
7:00 to 7:15	8	1	9	2	0	2	11
7:15 to 7:30	5	0	5	7	2	9	14
7:30 to 7:45	5	1	6	1	0	1	7
7:45 to 8:00	4	0	4	9	2	11	15
8:00 to 8:15	8	1	9	5	0	5	14
8:15 to 8:30	15	1	16	13	2	15	31
8:30 to 8:45	11	1	12	9	1	20	32
8:45 to 9:00	8	3	11	11	0	11	22
9:00 to 9:15	7	4	11	16	2	18	29
9:15 to 9:30	7	2	9	10	0	10	19
9:30 to 9:45	9	2	11	19	2	21	32
9:45 to 10:00	11	2	13	14	1	15	28
10:00 to 10:15	6	4	10	11	5	16	26
10:15 to 10:30	9	1	10	18	0	18	28
10:30 to 10:45	13	0	13	9	1	10	23
10:45 to 11:00	15	3	18	10	3	13	31
11:00 to 11:15	11	2	13	16	2	18	31
11:15 to 11:30	10	0	10	6	1	7	17
11:30 to 11:45	13	6	19	12	1	13	32
11:45 to 12:00	6	0	6	8	1	9	15
12:00 to 12:15	8	2	10	11	2	13	23
12:15 to 12:30	6	0	6	13	2	15	21
12:30 to 12:45	10	1	11	14	0	14	25
12:45 to 1:00	6	5	11	13	0	13	24
1:00 to 1:15	16	0	16	8	1	9	25
1:15 to 1:30	10	2	12	8	0	8	20
1:30 to 1:45	10	0	10	14	0	14	24
1:45 to 2:00	11	1	12	20	2	22	34
2:00 to 2:15	13	0	13	12	1	13	26
2:15 to 2:30	14	2	16	19	1	20	36
2:30 to 2:45	11	0	11	11	0	11	22
2:45 to 3:00	14	1	15	18	2	20	35
3:00 to 3:15	6	0	6	17	5	22	28
3:15 to 3:30	18	0	18	19	4	23	41
3:30 to 3:45	7	2	9	17	3	20	29
3:45 to 4:00	12	5	17	17	1	18	35
4:00 to 4:15	14	1	15	14	1	15	30
4:15 to 4:30	22	2	24	16	1	17	41
4:30 to 4:45	15	2	17	17	2	19	36
4:45 to 5:00	18	2	20	11	1	12	32
5:00 to 5:15	7	2	9	20	1	21	30
5:15 to 5:30	14	1	15	28	3	31	46
5:30 to 5:45	13	1	14	19	0	19	33
5:45 to 6:00	7	0	7	15	2	17	24
Total ...	463	66	529	587	61	648	1177

TABLE 5
(Page 18)

Volume of Automobile Traffic
March 4, 1930
ROUTE 11, NEAR MT. PATRICK, PA.
7 A. M. to 6 P. M.

Time	Southbound Traffic			Northbound Traffic			Total Both Directions
	Pass. Autos	Trucks and Busses	Total	Pass. Autos	Trucks and Busses	Total	
7:00 to 7:15	4	0	4	0	3	3	7
7:15 to 7:30	1	0	1	2	0	2	3
7:30 to 7:45	3	0	3	4	1	5	8
7:45 to 8:00	3	2	5	1	2	3	8
8:00 to 8:15	5	1	6	4	0	4	10
8:15 to 8:30	3	0	3	0	0	0	3
8:30 to 8:45	7	0	7	4	0	4	11
8:45 to 9:00	2	2	4	4	2	6	10
9:00 to 9:15	7	1	8	6	3	9	17
9:15 to 9:30	8	0	8	4	1	5	13
9:30 to 9:45	3	1	4	7	2	9	13
9:45 to 10:00	10	0	10	14	1	15	25
10:00 to 10:15	4	3	7	5	2	7	14
10:15 to 10:30	5	1	6	8	3	11	17
10:30 to 10:45	10	3	13	9	2	11	24
10:45 to 11:00	16	2	18	9	1	10	28
11:00 to 11:15	1	0	1	0	3	3	4
11:15 to 11:30	5	1	6	10	1	11	17
11:30 to 11:45	3	0	3	5	1	6	9
11:45 to 12:00	7	0	7	3	2	5	12
12:00 to 12:15	4	0	4	5	1	6	10
12:15 to 12:30	3	0	3	5	1	6	9
12:30 to 12:45	3	2	5	7	0	7	12
12:45 to 1:00	6	0	6	5	0	5	11
1:00 to 1:15	5	1	6	10	1	11	17
1:15 to 1:30	10	1	11	3	2	5	16
1:30 to 1:45	4	1	5	2	0	2	7
1:45 to 2:00	2	0	2	11	1	12	14
2:00 to 2:15	10	0	10	15	2	17	27
2:15 to 2:30	7	1	8	8	0	8	16
2:30 to 2:45	6	0	6	8	0	8	14
2:45 to 3:00	1	1	2	8	2	10	12
3:00 to 3:15	8	0	8	7	0	7	15
3:15 to 3:30	9	2	11	9	1	10	21
3:30 to 3:45	10	1	11	9	3	12	23
3:45 to 4:00	4	1	5	9	0	9	14
4:00 to 4:15	8	1	9	6	0	6	15
4:15 to 4:30	8	1	9	11	2	13	22
4:30 to 4:45	9	0	9	9	2	11	20
4:45 to 5:00	3	1	4	8	2	10	14
5:00 to 5:15	7	1	8	7	0	7	15
5:15 to 5:30	3	0	3	7	2	9	12
5:30 to 5:45	3	0	3	10	0	10	13
5:45 to 6:00	11	1	12	8	1	9	21
Total ...	251	33	284	286	53	339	623

TABLE 6
(Page 19).

Volume of Automobile Traffic
March 4, 1930
ROUTE 33, NEAR MECKS CORNER, PA.
7 A. M. to 6 P. M.

Time	Northbound and Eastbound Traffic			Southbound Traffic			Total Both Directions
	Pass. Autos	Trucks and Busses	Total	Pass. Autos	Trucks and Busses	Total	
7:00 to 7:15	1	0	1	0	0	0	1
7:15 to 7:30	1	0	1	0	0	0	1
7:30 to 7:45	0	1	1	0	1	1	2
7:45 to 8:00	1	0	1	3	0	3	4
8:00 to 8:15	1	1	2	1	0	1	3
8:15 to 8:30	0	0	0	1	1	2	2
8:30 to 8:45	1	2	3	1	0	1	4
8:45 to 9:00	3	2	5	1	0	1	6
9:00 to 9:15	1	2	3	2	2	4	7
9:15 to 9:30	2	1	3	1	0	1	4
9:30 to 9:45	1	1	2	2	0	2	4
9:45 to 10:00	2	1	3	3	1	4	7
10:00 to 10:15	4	1	5	3	0	3	8
10:15 to 10:30	8	1	9	3	2	5	14
10:30 to 10:45	3	0	3	3	0	3	6
10:45 to 11:00	1	1	2	2	1	3	5
11:00 to 11:15	1	1	2	2	0	2	4
11:15 to 11:30	0	2	2	2	0	2	4
11:30 to 11:45	1	1	2	6	1	7	9
11:45 to 12:00	1	0	1	2	0	2	3
12:00 to 12:15	2	1	3	3	0	3	6
12:15 to 12:30	1	1	2	3	3	6	8
12:30 to 12:45	1	1	2	2	1	3	5
12:45 to 1:00	2	1	3	2	0	2	5
1:00 to 1:15	0	1	1	0	1	1	2
1:15 to 1:30	4	0	4	2	0	2	6
1:30 to 1:45	1	0	1	1	1	2	3
1:45 to 2:00	3	0	3	2	1	3	6
2:00 to 2:15	1	0	1	1	0	1	2
2:15 to 2:30	1	1	2	1	0	1	3
2:30 to 2:45	2	0	2	4	1	5	7
2:45 to 3:00	5	1	6	3	2	5	11
3:00 to 3:15	3	0	3	1	0	1	4
3:15 to 3:30	5	1	6	4	1	5	11
3:30 to 3:45	1	0	1	6	1	7	8
3:45 to 4:00	2	2	4	3	0	3	7
4:00 to 4:15	2	1	3	6	1	7	10
4:15 to 4:30	3	0	3	0	0	0	3
4:30 to 4:45	3	1	4	4	1	5	9
4:45 to 5:00	2	1	3	1	1	2	5
5:00 to 5:15	3	0	3	2	2	4	7
5:15 to 5:30	3	0	3	3	0	3	6
5:30 to 5:45	5	0	5	1	1	2	7
5:45 to 6:00	2	0	2	3	2	5	7
Total ...	90	31	121	96	29	125	246

TABLE 7
(Page 20)

Volume of Automobile Traffic
March 4, 1930
ROUTE 274, NEAR NEW BLOOMFIELD, PA.
7 A. M. to 6 P. M.

Time	Eastbound Traffic			Westbound Traffic			Total Both Directions
	Pass. Autos	Trucks and Busses	Total	Pass. Autos	Trucks and Busses	Total	
7:00 to 7:15	2	1	3	2	2	4	7
7:15 to 7:30	2	5	7	2	0	2	9
7:30 to 7:45	0	0	0	4	0	4	4
7:45 to 8:00	4	0	4	2	0	2	6
8:00 to 8:15	3	0	3	2	0	2	5
8:15 to 8:30	5	0	5	4	1	5	10
8:30 to 8:45	2	2	4	3	1	4	8
8:45 to 9:00	2	3	5	2	2	4	9
9:00 to 9:15	3	1	4	4	2	6	10
9:15 to 9:30	6	2	8	6	6	12	20
9:30 to 9:45	3	1	4	1	0	1	5
9:45 to 10:00	0	3	3	3	1	4	7
10:00 to 10:15	2	4	6	2	3	5	11
10:15 to 10:30	5	1	6	1	0	1	7
10:30 to 10:45	4	0	4	4	1	5	9
10:45 to 11:00	7	1	8	2	3	5	13
11:00 to 11:15	2	0	2	3	5	8	10
11:15 to 11:30	5	0	5	2	0	2	7
11:30 to 11:45	5	3	8	6	2	8	16
11:45 to 12:00	2	0	2	1	1	2	4
12:00 to 12:15	1	0	1	2	0	2	3
12:15 to 12:30	4	2	6	1	0	1	7
12:30 to 12:45	5	1	6	3	2	5	11
12:45 to 1:00	4	0	4	0	1	1	5
1:00 to 1:15	5	0	5	3	2	5	10
1:15 to 1:30	3	0	3	2	0	2	5
1:30 to 1:45	4	1	5	4	4	8	13
1:45 to 2:00	4	0	4	3	1	4	8
2:00 to 2:15	4	2	6	2	2	4	10
2:15 to 2:30	2	3	5	4	0	4	9
2:30 to 2:45	5		5	6	0	6	11
2:45 to 3:00	0		0	2	0	2	2
3:00 to 3:15	4	3	7	5	0	5	12
3:15 to 3:30	3	0	3	8	0	8	11
3:30 to 3:45	1	3	4	1	1	2	6
3:45 to 4:00	3	2	5	5	2	7	12
4:00 to 4:15	3	1	4	7	1	8	12
4:15 to 4:30	5	1	6	7	3	10	16
4:30 to 4:45	2	2	4	3	1	4	8
4:45 to 5:00	7	1	8	1	0	1	9
5:00 to 5:15	6	1	7	6	1	7	14
5:15 to 5:30	9	0	9	4	1	5	14
5:30 to 5:45	2	0	2	5	1	6	8
5:45 to 6:00	4	2	6	7	1	8	14
Total ...	154	52	206	147	54	201	407

TABLE 8
(Page 21)

Volume of Automobile Traffic
March 4, 1930
ROUTE 22, NEAR MILLERSTOWN, PA.
7 A. M. to 6 P. M.

Time	Westbound Traffic			Eastbound Traffic			Total Both Directions
	Pass. Autos	Trucks and Busses	Total	Pass. Autos	Trucks and Busses	Total	
7:00 to 7:15	2	2	4	2	0	2	6
7:15 to 7:30	2	0	2	2	1	3	5
7:30 to 7:45	4	1	5	0	1	1	6
7:45 to 8:00	3	2	5	1	3	4	9
8:00 to 8:15	10	0	10	9	1	10	20
8:15 to 8:30	5	1	6	6	0	6	12
8:30 to 8:45	3	1	4	8	1	9	13
8:45 to 9:00	3	4	7	6	0	6	13
9:00 to 9:15	4	3	7	11	4	15	22
9:15 to 9:30	3	2	5	4	5	9	14
9:30 to 9:45	4	3	7	7	3	10	17
9:45 to 10:00	4	0	4	9	2	11	15
10:00 to 10:15	6	1	7	7	2	9	16
10:15 to 10:30	5	0	5	2	3	5	10
10:30 to 10:45	2	1	3	12	2	14	17
10:45 to 11:00	3	7	10	8	3	11	21
11:00 to 11:15	5	1	6	4	0	4	10
11:15 to 11:30	4	2	6	7	1	8	14
11:30 to 11:45	4	3	7	3	1	4	11
11:45 to 12:00	5	3	8	8	0	8	16
12:00 to 12:15	1	0	1	6	1	7	8
12:15 to 12:30	6	4	10	5	1	6	16
12:30 to 12:45	8	0	8	3	1	4	12
12:45 to 1:00	5	1	6	7	3	10	16
1:00 to 1:15	7	2	9	7	1	8	17
1:15 to 1:30	4	3	7	9	2	11	18
1:30 to 1:45	10	3	13	5	1	6	19
1:45 to 2:00	10	1	11	5	1	6	17
2:00 to 2:15	7	0	7	12	1	13	20
2:15 to 2:30	6	0	6	4	4	8	14
2:30 to 2:45	6	0	6	12	2	14	20
2:45 to 3:00	6	3	9	4	3	7	16
3:00 to 3:15	1	5	6	5	0	5	11
3:15 to 3:30	7	3	10	8	3	11	21
3:30 to 3:45	12	4	16	5	2	7	23
3:45 to 4:00	8	4	12	8	0	8	20
4:00 to 4:15	7	2	9	14	3	17	26
4:15 to 4:30	5	3	8	9	1	10	18
4:30 to 4:45	12	2	14	11	1	12	26
4:45 to 5:00	8	0	8	3	2	5	13
5:00 to 5:15	10	4	14	9	2	11	25
5:15 to 5:30	7	0	7	3	0	3	10
5:30 to 5:45	6	2	8	14	0	14	22
5:45 to 6:00	7	0	7	10	1	11	17
Total ...	247	83	330	294	69	362	692

Respondent's Exhibit No. 3

TABLE 9
(Page 22)

Volume of Automobile Traffic
March 4, 1930
ROUTE 209, EAST OF MILLERSBURG, PA.
7 A. M. to 6 P. M.

Time	Westbound Traffic			Eastbound Traffic			Total Both Directions
	Pass. Autos	Trucks and Busses	Total	Pass. Autos	Trucks and Busses	Total	
7:00 to 7:15	2	1	3	3	1	4	7
7:15 to 7:30	1	1	2	1	2	3	5
7:30 to 7:45	3	0	3	1	5	6	9
7:45 to 8:00	2	1	3	2	4	6	9
8:00 to 8:15	3	2	5	5	2	7	12
8:15 to 8:30	4	0	4	2	2	4	8
8:30 to 8:45	7	2	9	8	2	10	19
8:45 to 9:00	3	2	5	6	4	10	15
9:00 to 9:15	3	2	5	5	5	10	15
9:15 to 9:30	4	2	6	10	4	14	20
9:30 to 9:45	7	1	8	4	0	4	12
9:45 to 10:00	3	3	6	3	3	6	12
10:00 to 10:15	6	2	8	4	1	5	13
10:15 to 10:30	3	1	4	5	4	9	13
10:30 to 10:45	3	2	5	15	1	16	21
10:45 to 11:00	4	0	4	2	4	6	10
11:00 to 11:15	7	1	8	6	4	10	18
11:15 to 11:30	3	0	3	8	2	10	13
11:30 to 11:45	3	5	8	7	2	9	17
11:45 to 12:00	6	5	11	6	3	9	20
12:00 to 12:15	1	2	3	5	0	5	8
12:15 to 12:30	3	1	4	4	2	6	10
12:30 to 12:45	5	1	6	0	2	2	8
12:45 to 1:00	1	0	1	5	4	9	10
1:00 to 1:15	5	3	8	5	3	8	16
1:15 to 1:30	5	0	5	4	1	5	10
1:30 to 1:45	2	1	3	3	0	3	6
1:45 to 2:00	5	5	10	4	2	6	16
2:00 to 2:15	8	2	10	3	0	3	13
2:15 to 2:30	2	1	3	3	3	6	9
2:30 to 2:45	7	1	8	5	0	5	13
2:45 to 3:00	1	4	5	5	1	6	11
3:00 to 3:15	9	6	15	6	2	8	23
3:15 to 3:30	7	2	9	6	1	7	16
3:30 to 3:45	4	2	6	7	1	8	14
3:45 to 4:00	6	4	10	4	1	5	15
4:00 to 4:15	5	3	8	1	0	1	9
4:15 to 4:30	9	8	17	7	2	9	26
4:30 to 4:45	5	5	10	6	1	7	17
4:45 to 5:00	4	2	6	7	1	8	14
5:00 to 5:15	5	1	6	9	1	10	16
5:15 to 5:30	10	4	14	7	3	10	24
5:30 to 5:45	11	2	13	4	0	4	17
5:45 to 6:00	2	1	3	7	0	7	10
Total ...	199	94	293	220	86	306	599

TABLE 10
(Page 23)

Volume of Automobile Traffic
March 4, 1930
ROUTE 11, JUST NORTH OF HARRISBURG
7 A. M. to 6 P. M.

Time	Southbound Traffic			Northbound Traffic			Total Both Directions
	Pass. Autos	Trucks and Busses	Total	Pass. Autos	Trucks and Busses	Total	
7:00 to 7:15	9	1	10	8	4	12	22
7:15 to 7:30	15	2	17	13	11	24	41
7:30 to 7:45	21	2	23	16	6	22	45
7:45 to 8:00	20	10	30	16	7	23	53
8:00 to 8:15	24	10	34	20	7	27	61
8:15 to 8:30	19	5	24	15	8	23	47
8:30 to 8:45	28	6	34	20	9	29	63
8:45 to 9:00	31	8	39	35	6	41	80
9:00 to 9:15	18	6	24	20	11	31	55
9:15 to 9:30	14	6	20	32	3	35	55
9:30 to 9:45	17	7	24	19	4	23	47
9:45 to 10:00	13	3	16	18	10	28	44
10:00 to 10:15	15	7	22	34	9	43	65
10:15 to 10:30	16	7	23	17	5	22	45
10:30 to 10:45	13	5	18	15	9	24	42
10:45 to 11:00	11	6	17	24	6	30	47
11:00 to 11:15	26	5	31	31	6	37	68
11:15 to 11:30	32	8	40	19	4	23	63
11:30 to 11:45	19	10	29	23	4	27	56
11:45 to 12:00	22	10	32	27	6	33	65
12:00 to 12:15	12	4	16	22	3	25	41
12:15 to 12:30	20	7	27	20	2	22	49
12:30 to 12:45	14	1	15	20	3	23	38
12:45 to 1:00	21	5	26	15	1	16	42
1:00 to 1:15	22	5	27	17	3	20	47
1:15 to 1:30	19	7	26	26	3	29	55
1:30 to 1:45	26	3	29	25	7	32	61
1:45 to 2:00	22	4	26	24	5	29	55
2:00 to 2:15	21	5	26	28	5	33	59
2:15 to 2:30	29	6	35	24	5	29	64
2:30 to 2:45	26	5	31	32	7	39	70
2:45 to 3:00	28	5	33	29	5	34	67
3:00 to 3:15	24	2	26	26	13	39	65
3:15 to 3:30	26	1	27	23	6	29	56
3:30 to 3:45	27	8	35	21	6	27	62
3:45 to 4:00	29	7	36	40	5	45	81
4:00 to 4:15	29	13	42	47	7	54	96
4:15 to 4:30	29	3	32	32	6	38	70
4:30 to 4:45	49	12	61	29	5	34	95
4:45 to 5:00	41	10	51	38	1	39	90
5:00 to 5:15	31	6	37	47	3	50	87
5:15 to 5:30	34	3	37	55	1	56	93
5:30 to 5:45	26	10	36	41	5	46	82
5:45 to 6:00	36	2	38	37	6	43	81
Total ...	1024	258	1282	1140	248	1388	2670

TABLE 11
(Page 24)

Volume of Automobile Traffic
March 4, 1930
ROUTE 5, NEAR DUNCANNON, PA.
7 A. M. to 6 P. M.

Time	Northbound Traffic			Southbound Traffic			Total Both Directions
	Pass. Autos	Trucks and Busses	Total	Pass. Autos	Trucks and Busses	Total	
7:00 to 7:15	1	0	1	1	0	1	2
7:15 to 7:30	1	0	1	7	0	7	8
7:30 to 7:45	9	0	9	4	0	4	13
7:45 to 8:00	4	2	6	0	0	0	6
8:00 to 8:15	2	2	4	0	0	0	4
8:15 to 8:30	2	3	5	3	1	4	9
8:30 to 8:45	3	3	6	3	2	5	11
8:45 to 9:00	2	2	4	4	3	7	11
9:00 to 9:15	0	0	0	1	0	1	1
9:15 to 9:30	4	2	6	5	4	9	15
9:30 to 9:45	3	3	6	1	1	2	8
9:45 to 10:00	2	1	3	2	0	2	5
10:00 to 10:15	3	3	6	2	0	2	8
10:15 to 10:30	2	1	3	1	1	2	5
10:30 to 10:45	5	3	8	3	1	4	12
10:45 to 11:00	2	1	3	2	0	2	5
11:00 to 11:15	1	0	1	1	2	3	4
11:15 to 11:30	4	2	6	3	2	5	11
11:30 to 11:45	2	1	3	4	0	4	7
11:45 to 12:00	6	1	7	3	0	3	10
12:00 to 12:15	3	2	5	3	0	3	8
12:15 to 12:30	5	0	5	0	1	1	6
12:30 to 12:45	0	0	0	3	0	3	3
12:45 to 1:00	1	1	2	3	1	4	6
1:00 to 1:15	3	2	5	1	0	1	6
1:15 to 1:30	7	1	8	3	1	4	12
1:30 to 1:45	5	1	6	5	4	9	15
1:45 to 2:00	4	1	5	4	0	4	9
2:00 to 2:15	6	0	6	6	2	8	14
2:15 to 2:30	3	0	3	2	2	4	7
2:30 to 2:45	0	1	1	2	3	5	6
2:45 to 3:00	1	1	2	2	0	2	4
3:00 to 3:15	5	0	5	9	1	10	15
3:15 to 3:30	3	2	5	5	1	6	11
3:30 to 3:45	4	1	5	6	0	6	11
3:45 to 4:00	1	0	1	5	2	7	8
4:00 to 4:15	13	0	13	2	1	3	16
4:15 to 4:30	4	1	5	4	3	7	12
4:30 to 4:45	7	0	7	2	0	2	9
4:45 to 5:00	5	0	5	1	4	5	10
5:00 to 5:15	3	1	4	4	1	5	9
5:15 to 5:30	2	0	2	1	1	2	4
5:30 to 5:45	2	0	2	3	2	5	7
5:45 to 6:00	1	1	2	0	0	0	2
Total ...	146	46	192	126	47	173	365

TABLE 12

(Page 25)

TRAFFIC STUDY—CLARK'S FERRY BRIDGE

Comparison of Average Daily Traffic on Tributary Highways

		State Counts and Estimates			Counts of Morris Knowles, Incorporated				Ratio of Actual Traffic to State Estimated for 1930 (percent)
Station	County	New Station Number	1924 Count Annual Daily Aver.	Estimate for 1930 Annual Daily Aver.**	Station No.	11-hr. Count Mar. 4, 1930	Conversion Factor	Annual Daily Average 1930	
Harrisburg	Dauphin	31	3,231	5,420	A	2,670	2.99	7,980	147
Millersburg	Dauphin	720	412	690	C	599	2.99	1,790	260
Duncannon	Perry	1,123	405*	620	H	365	2.99	1,090	176
Mecks Corner	Perry	282	376	570	F	246	2.99	735	129
New Bloomfi'd	Perry	285	373	570	G	407	2.99	1,215	213
Millerstown	Perry	283	322	490	E	692	2.99	2,070	423
Mt. Patrick	Perry	1,651*	757*	—	D	623	2.99	1,860	—

*1923 Count.

**From "Report of a Survery of Transportation on the State Highways of Pennsylvania" by The Bureau of Public Roads, United States Department of Agriculture and The Department of Highways of the Commonwealth of Pennsylvania, 1928, Appendix II.

Respondent's Exhibit No. 3

579a

TABLE 13
(Page 26)

TRAFFIC STUDY—CLARK'S FERRY BRIDGE

Estimates of Population and Motor Vehicle Registration Area Within 100 Miles, by Improved Highway, of Clark's Ferry Bridge

Section	Population 1910	Population 1920	Population Estimated 1929	Population Estimated 1935	Estimated Motor Vehicles per 1,000 Population 1929	Estimated Motor Vehicles per 1,000 Population 1935	Estimated Registration 1929	Estimated Registration 1935	Estimated Percent Increase 1929-1935 In Registration	Estimated Percent Increase 1929-1935 In Population
A	21,198	21,603	22,000	22,200	245	314	5,390	6,980	30	1
B	41,745	43,979	46,000	47,300	191	236	8,780	11,400	30	3
C	108,088	112,050	115,600	118,000	272	350	31,500	41,300	31	2
D	99,608	110,673	120,600	127,300	173	231	20,800	29,400	41	6
E	32,315	34,019	35,500	36,600	255	316	9,050	11,600	28	3
F	117,685	122,034	126,000	128,600	209	261	26,400	33,500	27	2
G	6,836	6,509	6,200	6,000	245	314	1,520	1,890	24	—3
H	1,784	1,477	1,200	1,000	245	314	294	314	7	—17
I	47,575	47,389	47,400	47,100	285	356	13,500	16,800	24	—1
J	241,092	256,020	269,500	278,400	262	326	70,600	90,800	29	3
K	404,863	442,866	477,100	499,400	262	326	125,000	163,000	30	5
L	1,268,447	1,449,449	1,612,400	1,721,000	262	326	423,000	561,000	33	7
M	48,979	47,103	45,400	44,300	196	255	8,900	11,300	27	—2
N	341,241	373,360	402,300	421,500	168	222	67,500	93,600	39	5
Total Exclusive of "A"	2,760,258	3,046,928	3,305,200	3,476,500			806,844	1,065,904	32	5
Estimate of State Department of Highways for Pennsylvania									30	—

NOTE: Section "A" is a subarea including portions of Section B, E, G, I, K and M. For location of Sections see Drawing D-8422B.

TABLE 14

(Page 27)

ESTIMATED ANNUAL TRAFFIC USING CLARK'S FERRY BRIDGE CONSIDERING VARIOUS PROBABLE IMPROVEMENTS IN HIGHWAY SYSTEM—1930 TO 1935

	Estimated Automobile, Truck and Bus Traffic					
	1930	1931	1932	1933	1934	1935
Existing Highways Unchanged	1,110,000	1,170,000	1,210,000	1,245,000	1,275,000	1,292,100
A Improvement of Route No. 5, Kinkora Heights to New Bloomfield Road	980,000	1,030,000	1,070,000	1,100,000	1,120,000	1,124,250
B Improvement of Route No. 14, Sunbury to Millersburg	910,000	960,000	1,000,000	1,030,000	1,050,000	1,055,920
C Improvement of Route No. 5, Duncannon to Lemoyne	680,000	715,000	745,000	770,000	780,000	788,100
D Proposed Bridge across Susquehanna River near Liverpool or Millersburg	980,000	1,030,000	1,070,000	1,100,000	1,120,000	1,116,505
E Improvements Described in A and B	800,000	835,000	865,000	890,000	910,000	916,100
F Improvements Described in B and C	525,000	550,000	570,000	585,000	595,000	602,240
G Improvements Included in A, B and D	490,000	510,000	530,000	545,000	555,000	560,630

NOTE: Actual traffic in 1929 was 1,096,927.
Normal traffic in 1929 was 1,008,427.

TABLE 15

(Page 28)

CLARK'S FERRY BRIDGE

ESTIMATED ANNUAL GROSS REVENUE AT PRESENT RATES, BASED UPON ESTIMATED ANNUAL VOLUME OF AUTOMOBILE, TRUCK AND BUS TRAFFIC WITH VARIOUS PROBABLE IMPROVEMENTS MADE IN HIGHWAY SYSTEM—1930 TO 1935

	Estimated Gross Revenue at Present Rates					
	1930	1931	1932	1933	1934	1935
Existing Highways Unchanged	117,500	123,500	128,000	131,500	134,500	136,000
A Improvement of Route No. 5, Kinkora Heights to New Bloomfield Road	103,500	108,500	113,000	116,000	118,000	119,000
B Improvement of Route No. 14, Sunbury to Millersburg	96,000	101,500	105,500	108,500	111,000	112,000
C Improvement of Route No. 5, Duncannon to Lemoyne	72,000	75,500	78,500	81,000	82,500	83,500
D Proposed Bridge across Susquehanna River near Liverpool or Millersburg	103,500	108,500	113,000	116,000	118,500	119,000
E Improvements Described in A and B	84,500	88,000	91,000	94,000	96,000	97,000
F Improvements Described in B and C	55,500	58,000	60,000	62,000	63,000	63,500
G Improvements Included in A, B and D ...	51,000	54,000	56,000	57,500	58,500	59,000

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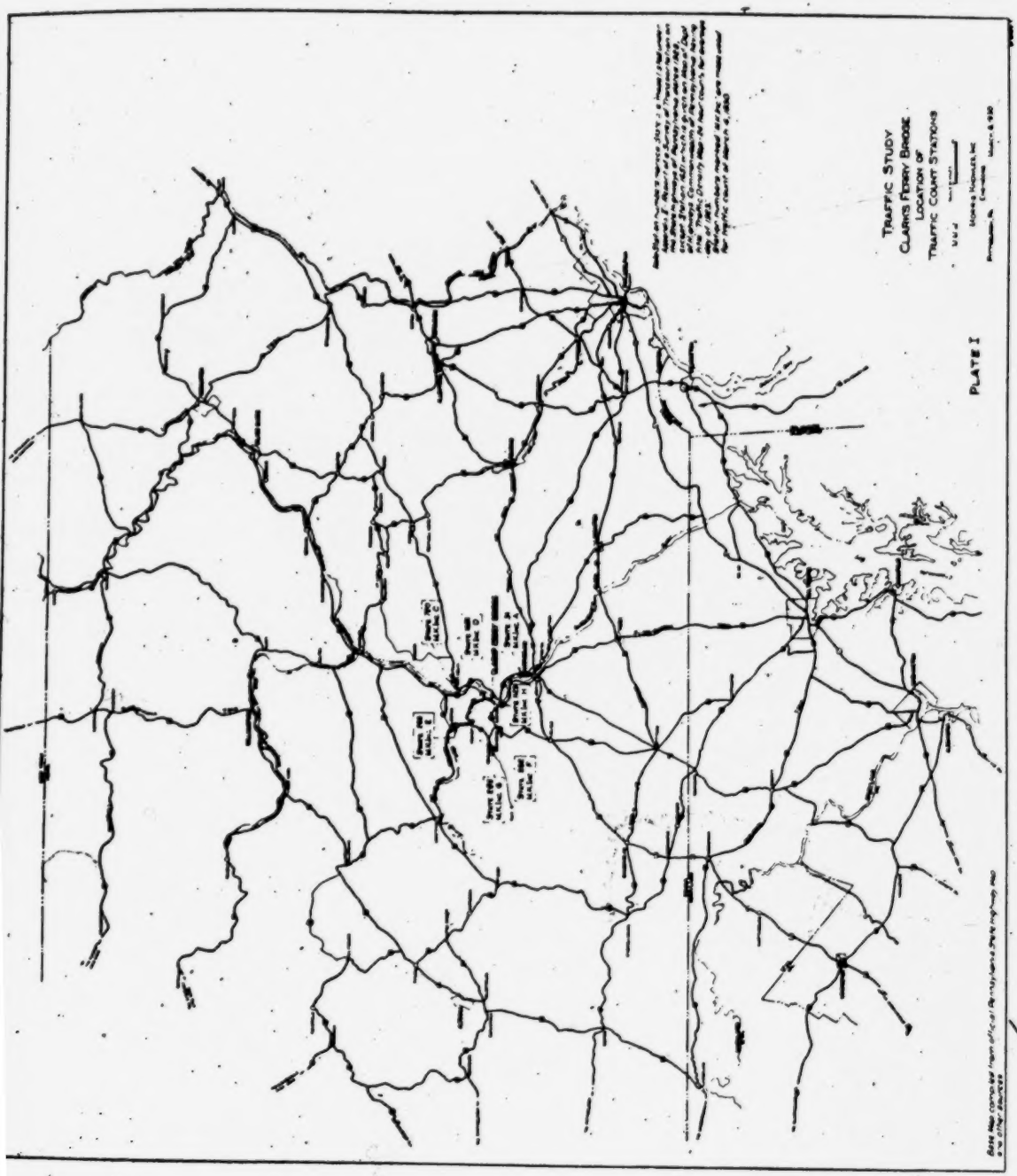
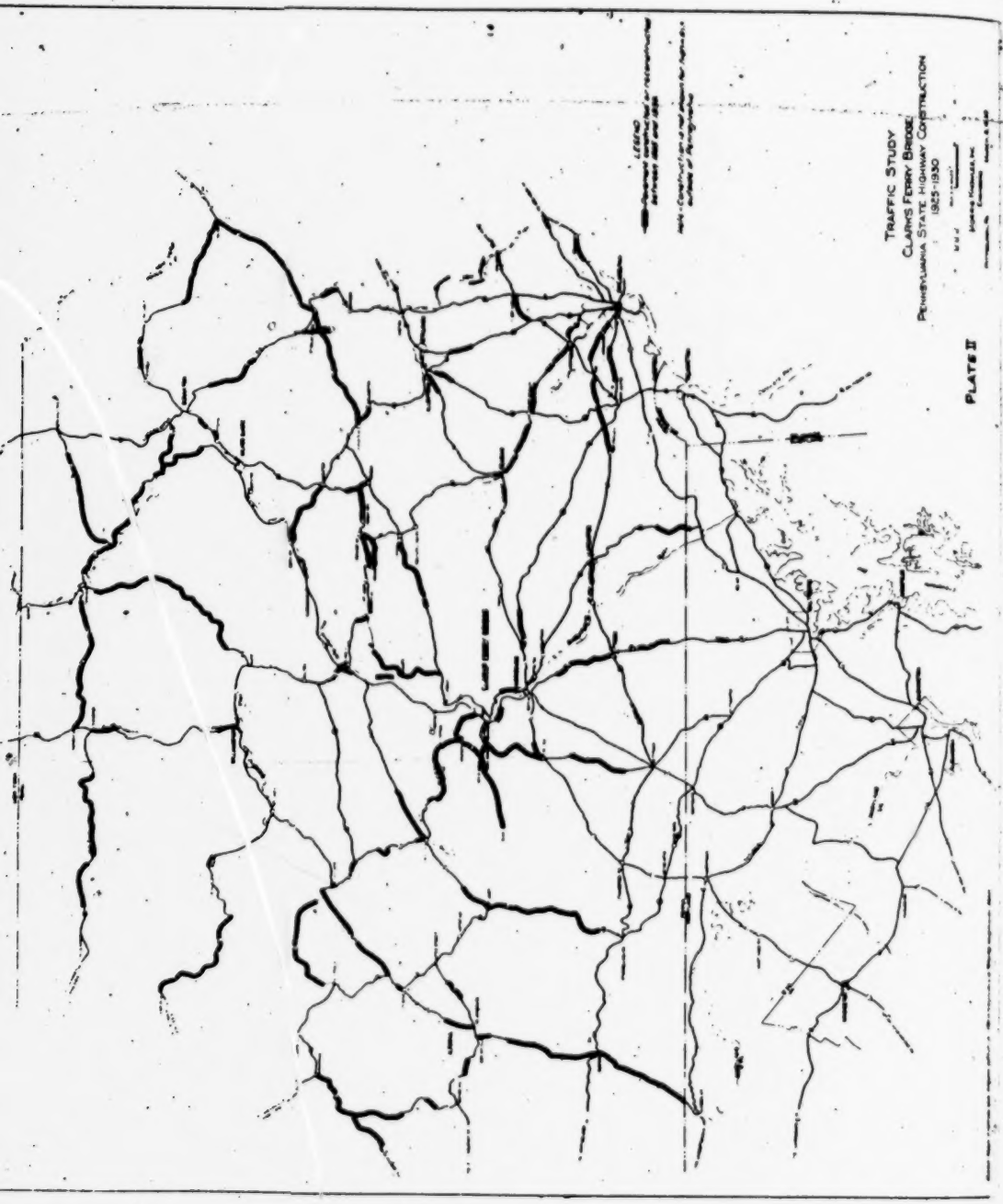
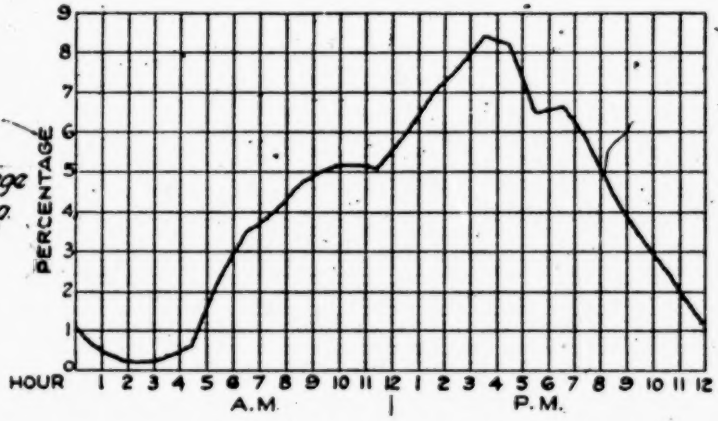

TRAFFIC STUDY
CLARKS FERRY BRIDGE
LOCATION OF
TRAFFIC COUNT STATIONS
PLATE I

(Page 30)


TRAFFIC STUDY
CLARKS FERRY BRIDGE
PENNSYLVANIA STATE HIGHWAY CONSTRUCTION
1925-1930
PLATE II

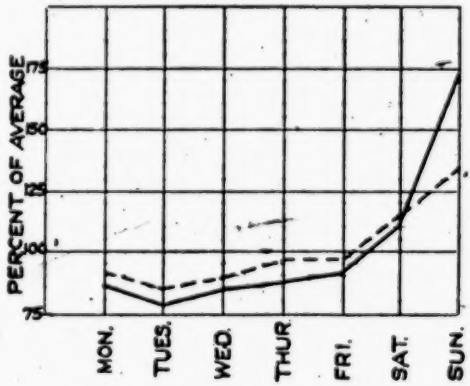
MORRIS KNOWLES INC.

ENGINEERS
PITTSBURGH - PENNA.



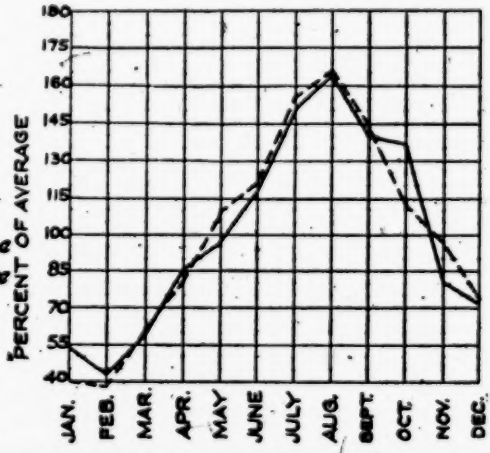
—1924 Average for Penna.

24 HOUR COMPARISON



—1924 Average for Penna.
----Automobiles over Clarks Ferry Bridge Jan. and Feb. 1930

7 DAY COMPARISON



—1924 Average for Penna.
----Average of traffic over Clarks Ferry Bridge 1925-1929 inclusive

12 MONTH COMPARISON

PLATE III

DR. E.N.Q.	DATE 3-8-30	TRAFFIC STUDY FOR CLARKS FERRY BRIDGE
TR. H.G.	REV.	HOURLY, DAILY AND SEASONAL
CH. W.J.	REV.	VARIATIONS IN TRAFFIC

A-8423

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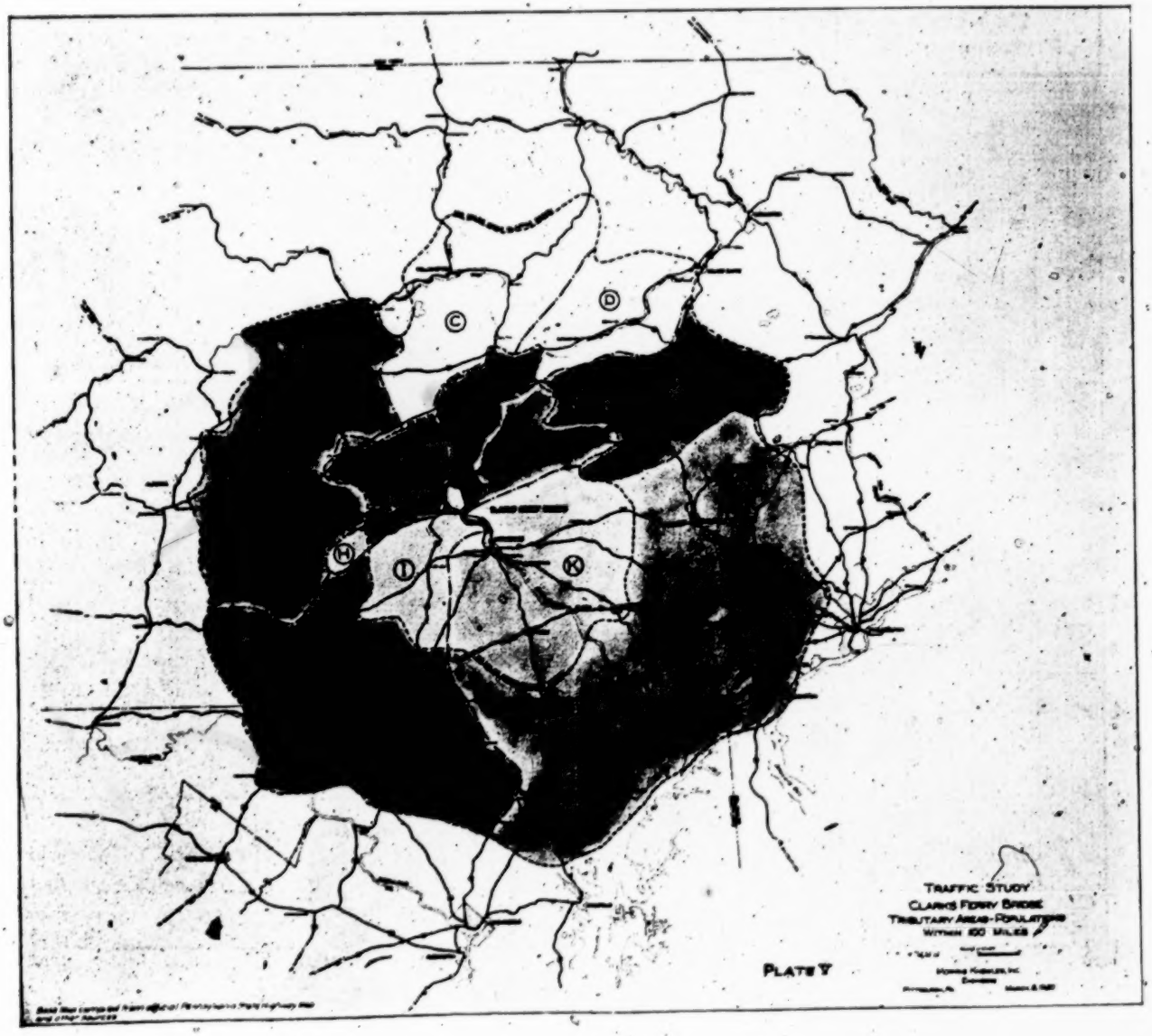

Respondent's Exhibit No. 3

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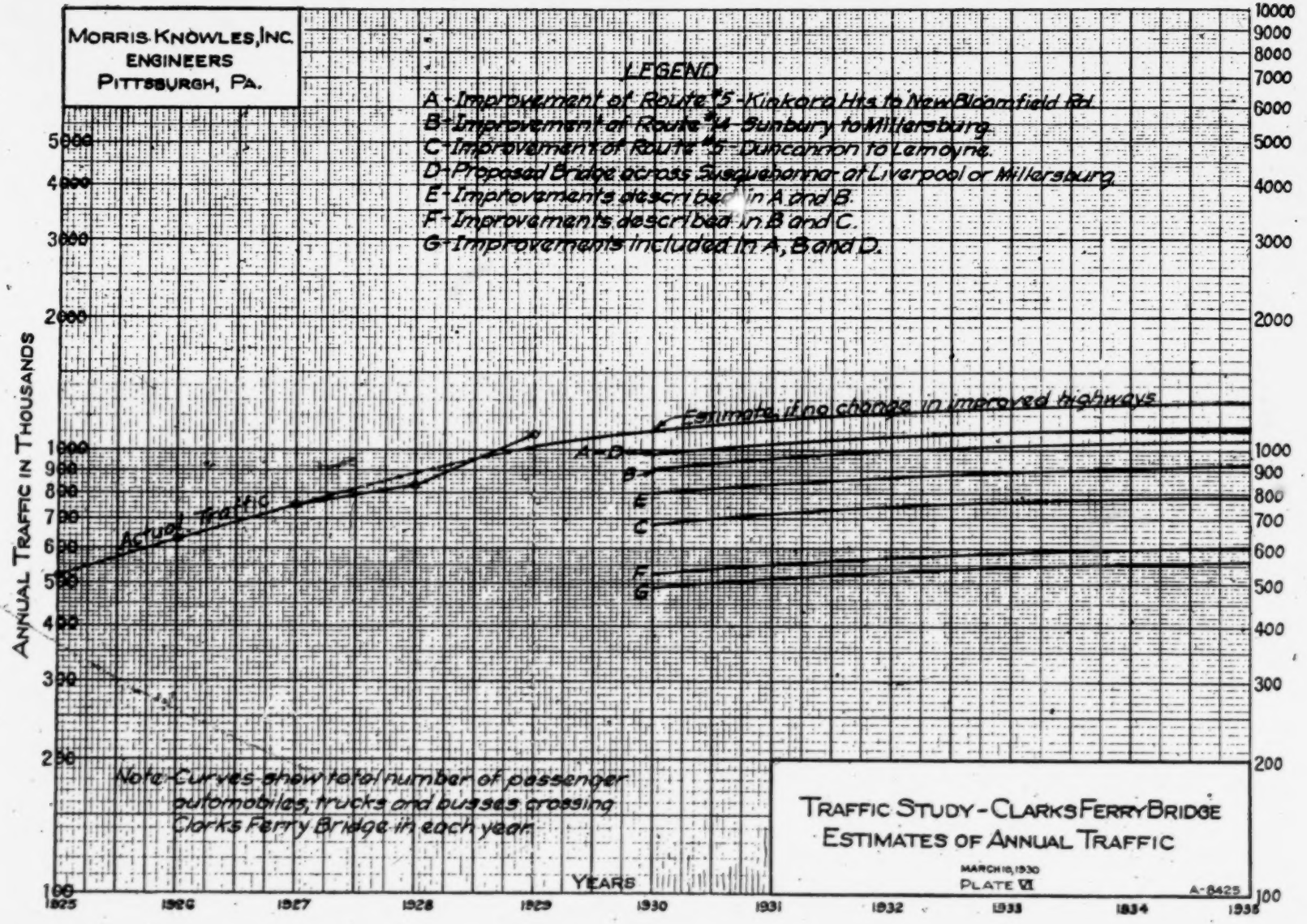

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SUPPLEMENTARY REPORT

May 6, 1930

902HO

Clarks Ferry Bridge Company,
Duncannon, Pennsylvania.

Gentlemen:

This letter is presented as a supplement to our report dated March 10, 1930, entitled "Report on Survey of Traffic Over the Clarks Ferry Bridge". Its purpose is to record the results of a count of traffic over the Clarks Ferry Bridge and adjacent highways made on April 10, 1930.

The check counts were made for the purpose of verifying the reasonableness of certain assumptions made in the report. The procedure followed was the same as that for the count of March 4, 1930. The results obtained, expressed in terms of estimated traffic and revenue during the next five years, vary less than one percent from those given in the report.

Estimated Normal Traffic Over Bridge—1929:

Referring to the report, it will be noted that the first step in the study was to reduce the figure of 1,096,927 motor vehicles, which was the total traffic over the bridge in 1929, to the somewhat lower figure which would have obtained had no traffic been diverted over the bridge during 1929 on account of

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the road construction near Perdix. This reduced figure, designated as the "normal traffic" for 1929, is the basic figure from which the estimates of future traffic were made.

The total normal traffic over the bridge in 1929, as estimated from the first count, was 1,006,427; and from the check count 1,012,627, or a difference of four-tenths of one percent.

Estimated Percentage of Local and Through Traffic:

The following table gives the total local and through traffic over the bridge from 7 A. M. to 6 P. M. on March 4 and April 10, 1930:

	Local	Through	Total
March 4	946	232	1178
April 10	1267	327	1594

The local traffic—that originating or destined to points within fifty miles of the bridge—was found by the first count to comprise 80 percent of the total. On the check count, the local traffic made up 79.4 percent of the total.

However, the local traffic will comprise a smaller percentage when taken for the whole year, than it does in March or April. The curve on Plate IV. of the report has been utilized in order to make proper allowance for this fact. For the entire year it is estimated, on the basis of the check count, that the local traffic was 71.7 percent of the total.

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This compares with 67.3 percent as determined from the first count.

The following table gives a comparison of local, through and total normal traffic for 1929, as estimated from the two counts:

Estimates of Normal Traffic Over Clarks Ferry Bridge—1929:

	Local	Through	Total
Based on Bridge Company Records and Count of March 4, 1930.	678,400	330,027	1,008,427
Based on Bridge Company Records and Count of April 10, 1930.	726,627	286,000	1,012,627

Interchange of Traffic According to Origin and Destination:

An analysis has been made of the origin and destination of traffic over the bridge on April 10, 1930; giving results comparable to those listed as Items (a) in Tables 2 and 3, pages 15 and 16 of the report. These figures are used to determine the proportionate amount of the total traffic over the bridge which travels between the points indicated in the tables.

The results of the count of April 10th agree closely with those of March 4th, as shown in Table 16 attached hereto. The largest single item in this table, which shows local traffic only, is the interchange between "Route No. 22—Newport and Points North of Newport" and "Harrisburg". The count of March 4th showed 236 cars, which was 25 percent of the total; the count of April 10th showed 318 cars, or 25.2 percent of the total. There are only three instances where there is a difference of

one or more in the percentage. The greatest disparity found was in the interchange between "Route

No. 11—Points North and Northeast of Northumberland" and "Harrisburg", where the count of March 4th showed 121 cars, or 12.8 percent of the total; and the count of April 10th showed 127 cars, or 10 percent of the total.

Considering the interchange of through traffic, as given on Table 17, we find here also a close agreement between the results of the two counts. For example, considering the interchange between "Route 11" and "Points 50 miles or more by Highway and South and Southwest of Clarks Ferry Bridge (West of Susquehanna River)", the count of March 4th showed 83 cars, or 35.8 percent of the total; that of April 10th, 118 cars, or 36.1 percent of the total. In each instance the difference in the percentages was less than one.

Effect of Check Count Data on Final Results:

Allowing the same rates of increase in local and through traffic as were used in the report, it is found that the probable total traffic over the bridge in 1935, according to the count of April 10th, will be 1,297,000. This assumes no change in existing highways and is comparable to the figure of 1,292,100, which was determined from the count of March 4th and is given in Table 14, page 27 of the report. The difference amounts to approximately 5,000 cars, or $500 in yearly revenue. The variation between the two estimates is about .4 of one percent for the year 1935. Approximately the same percentage would apply to the four preceding years.

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The effect of certain probable highway improvements, upon future traffic over the bridge, is shown

on Table 14 of the report. These estimates were based upon traffic counts of March 4, 1930. It was found from the count of April 10th that the distribution of traffic over the bridge, according to its origin and destination, was practically the same as before. Consequently, the improvement of any one of the adjacent highways would have the same relative effect upon the estimates of future bridge traffic. If all the computations were carried through on the basis of the later count, the final results would probably not vary, in any case, by more than one percent from the estimates given in the report.

Summary:

The check count of April 10th was made approximately one month later and on a different day of the week than that of March 4th, on which the report is based.

Estimates of future traffic over the bridge, according to the two counts, agree within one percent.

This is well within the limits of error to be expected in a study of this nature.

The check count may be considered, therefore, as substantiating the conclusions drawn from the earlier data, and set forth in detail in the report.

Respectfully submitted,

MORRIS KNOWLES, INCORPORATED
Per WILFRED JUPENLAZ

TABLE 16

(Page 40)

ORIGIN AND DESTINATION OF AUTOMOBILE, TRUCK AND BUS TRAFFIC USING CLARK'S FERRY BRIDGE—LOCAL TRAFFIC ONLY
COMPARISON OF RESULTS OF COUNTS OF MARCH 4, 1930 AND APRIL 10, 1930

		Between Clark's Ferry Bridge and Harrisburg	Harrisburg	East of Harrisburg	South of Harrisburg but North of Dillsburg	South of Dillsburg	Route 209	Totals
Between Mecks Corner and Clark's Ferry Bridge via Duncannon	(a)	18 (19)	141 (110)	5 (3)	0 (0)	2 (0)	37 (7)	203 (139)
	(b)	1.4 (2.0)	11.1 (11.7)	0.4 (0.3)	0 (0)	0.2 (0)	2.9 (0.7)	16.0 (14.7)
West of Mecks Corner	(a)	3 (2)	55 (52)	13 (4)	0 (2)	3 (0)	13 (6)	87 (66)
	(b)	0.2 (0.2)	4.4 (5.5)	1.0 (0.4)	0 (0.2)	0.2 (0)	1.0 (0.7)	6.8 (7.0)
South of Duncannon	(a)	0 (0)	31 (22)	2 (0)	0 (0)	3 (1)	10 (16)	46 (39)
	(b)	0 (0)	2.4 (2.3)	0.2 (0)	0 (0)	0.2 (0.1)	0.8 (1.7)	3.6 (4.1)
Route 22—Between Clark's Ferry Bridge and South of Newport	(a)	4 (4)	21 (11)	1 (0)	0 (1)	0 (1)	11 (5)	37 (22)
	(b)	0.3 (0.4)	1.6 (1.2)	0.1 (0)	0 (0.1)	0 (0.1)	0.9 (0.5)	2.9 (2.3)
Route 22—Newport and Points North of Newport	(a)	9 (0)	318 (236)	58 (51)	0 (2)	31 (12)	23 (21)	439 (322)
	(b)	0.7 (0)	25.2 (25.0)	4.6 (5.4)	0 (0.2)	2.4 (1.3)	1.8 (2.2)	34.7 (34.1)
Route 11—Between Clark's Ferry Bridge and South of Northumberland	(a)	3 (5)	96 (66)	15 (4)	0 (0)	4 (3)	11 (13)	129 (91)
	(b)	0.2 (0.5)	7.6 (7.0)	1.2 (0.4)	0 (0)	0.3 (0.3)	0.9 (1.4)	10.2 (9.6)
Route 11—Sunbury, Shamokin and Vicinity	(a)	4 (0)	97 (70)	30 (26)	0 (0)	15 (8)	6 (4)	152 (108)
	(b)	0.3 (0)	7.6 (7.4)	2.4 (2.8)	0 (0)	1.2 (0.8)	0.5 (0.4)	12.0 (11.4)
Route 11—Points North and Northeast of Northumberland	(a)	0 (0)	127 (121)	26 (23)	2 (4)	15 (8)	4 (3)	174 (159)
	(b)	0 (0)	10.0 (12.8)	2.1 (2.4)	0.2 (0.4)	1.2 (0.9)	0.3 (0.3)	13.8 (16.8)
Totals	(a)	41 (30)	886 (688)	150 (111)	2 (9)	73 (33)	115 (75)	1267 (946)

NOTE: Items (a) show traffic over Clark's Ferry Bridge 7 a. m. to 6 p. m. on March 4, 1930 and April 10, 1930.
Items (b) show percentage of total local traffic over bridge.

The figures in parentheses are for count of March 4; the other figures are for count of April 10.

TABLE 17

(Page 41)

ORIGIN AND DESTINATION OF AUTOMOBILE, TRUCK AND BUS TRAFFIC USING CLARK'S FERRY BRIDGE — THROUGH TRAFFIC ONLY*

Comparison of Results of Counts on March 4, 1930 and April 10, 1930

Route			Points 50 Miles or More by Highway and South and Southwest of Clark's Ferry Bridge (West of Susquehanna River)		Points 50 Miles or More by Highway and East and Southeast of Clark's Ferry Bridge (East of Susquehanna River)		Points 50 Miles or More by Highway from Clark's Ferry Bridge along Route 209		Total	
11	(a)	Volume of Traffic, 7 a. m. to 6 p. m.	118	(83)	74	(51)	0	(0)	192	(134)
	(b)	Percent of Total	36.1	(35.8)	22.6	(22.0)	0	(0)	58.7	(57.8)
22	(a)	Volume of Traffic, 7 a. m. to 6 p. m.	23	(18)	112	(79)	0	(1)	135	(98)
	(b)	Percent of Total	7.1	(7.8)	34.2	(34.0)	0	(0.4)	41.3	(42.2)
Total	(a)	Volume of Traffic, 7 a. m. to 6 p. m.	141	(101)	186	(130)	0	(1)	327	(232)

*Traffic is considered through if its origin and destination are both a distance of 50 miles or more by highway from Clark's Ferry Bridge.

NOTE: Figures in parentheses are for count of March 4th; other figures are for count of April 10th.

RESPONDENT'S EXHIBIT NO. 4

(Testimony Taken and Exhibits Introduced in Evidence in the Former Case, Complaint Docket No. 6611, On Appeal to the Superior Court, No. 17, March Term, 1927).

E. G. PARSLY, a witness called in behalf of the respondent being duly sworn was examined and testified as follows on

Direct Examination

MR. HULL:

Q. What is your name?

A. E. G. Parsly.

Q. What is your occupation, Mr. Parsly?

A. I am a partner of Parsly Brothers and Company, Philadelphia.

Q. Engaged in what business?

A. Investment and banking business.

Q. How long have you been so engaged?

A. Twenty years in other connections.

Q. Mr. Parsly, did your firm purchase the issue of $450,000 worth of bonds of the Clark's Ferry Bridge Company, recently issued?

A. In conjunction with another firm we did, two names on the contract.

Q. Will you state what price you paid for those bonds?

A. Eighty-six dollars and interest, I think.

Q. Do you have the actual amount of cash that you paid the Clark's Ferry Bridge Company for the bonds?

A. Not with me. I can furnish that exact amount.

Q. That will show from the books of your company?

A. Yes, sir.

MR. HULL:

Mr. Commissioner, would there be any objection to offering that subsequently in the form of an affidavit?

THE COMMISSIONER:

I think that would be in order.

MR. HULL:

Q. Mr. Parsly, will you state why your firm was unwilling to pay any higher price for this issue?

A. At the time the business was brought to our attention the earnings of the Clark's Ferry Bridge were developing, and traffic conditions required a new bridge. In order to find a basis for the issuance of bonds we had to take the gross receipts of the company and adjust them to certain estimated operating expenses in order to obtain what seemed to us a fair margin. The fact that we had to assume certain estimates made us feel that there was something in the nature of a construction enterprise involved, consequently we had nothing to go by. There was not, as far as we could find, any similar issue of bonds in the State of Pennsylvania. There have been some issues in some other states which bore higher interest rates, and we had really to come back to try to compare that point with some other types of bonds, and we felt that they compared perhaps from a standpoint of the merit of the issue unfavorably with small electric light and power companies issues, and beginning at that point

we worked back to what seemed to us to be a fair price for the bonds.

Q. And the price which you paid was the highest price which you were willing to pay at the time and upon the information that you then had?

A. It was.

Letter dated April 12, 1924, addressed to Wm. C. Jennings, President, Clark's Ferry Bridge Company, produced and marked Respondent's Exhibit No. 1, E. E. M., 10/23/25.

Letter dated May 9, 1924, addressed to Wm. C. Jennings, President, Clark's Ferry Bridge Company, produced and marked Respondent's Exhibit No. 2, E. E. M., 10/23/25.

MR. HULL:

Q. Mr. Parsly, I show you Respondent's Exhibit No. 1, being a letter dated April 12, 1924, addressed to Wm. C. Jennings, President, Clark's Ferry Bridge Company, also Respondent's Exhibit No. 2, being a letter dated May 9, 1924, addressed to the same person, did you or your firm write those letters?

A. I personally wrote both of them.

Q. And do those letters contain your views at that time as to the value of this proposed issue of bonds?

A. They do.

Cross Examination

MR. COBLE:

Q. You say you bought them at a price of $86 and interest, those bonds?

A. Yes, sir.

Q. And what other types of bonds had you handled at the time that you handled the Clark's

Ferry Bridge issue?

A. We handled so many of them that it is impossible for me to say now just what bonds we were specifically handling.

Q. Can you say generally whether you handled light and power company bonds?

A. We handled a great number of light and power company bonds.

Q. What is the price that you customarily pay for such bonds?

A. At that time or now?

Q. Yes.

A. Which?

Q. At the time you took over the bridge company issue?

A. Electric light and power companies first mortgage 6 per cent bonds, free from Pennsylvania State tax, Pennsylvania corporations, entered in retail prices of perhaps a trifle under 95—94 to 101.

Q. What is the price that you customarily pay for bonds that will resell at, let us say, 95, what is the customary profit?

A. The customary profit—it is not customary profit. It depends upon the conditions. In the case of an original issue the price to be paid to a corporation for its securities on the property averages from maybe a minimum of 5 to a maximum of perhaps 8 or 9 per cent under the price at which the securities are to be resold.

Q. At what price did you sell these Clark's Ferry bonds?

A. Ninety-four, that is the retail price, not the wholesale price.

Q. You paid a commission on the sale of those bonds?

A. Yes, in various ways, that is.

Q. Would you tell us in what ways?

A. We resold, we didn't as a firm do it, our associates resold a certain amount of bonds to other dealers, and I don't know the exact price at which they resold to other dealers. I cannot either state the exact commission or discount which we allowed to banks. We don't pay a direct commission to our salesmen in selling securities, we pay a compensation which is based upon their profits, so it is not a direct commission on the security itself.

Q. You say your associates, who were your associates in handling the bonds?

A. Bartels and Company.

Q. That is the only firm that handled the bonds that you were associated with?

A. They were our partner in the bridge issue, but I personally handled all of the details.

Q. Do you know the ultimate destination of those bonds, where the most of them were taken up, what section of the country?

A. I can only speak for our own firm, and I would say that 75 per cent of them, of the portion that we resold, were sold in the city of Philadelphia.

Q. Were any of them sold in Harrisburg or Duncannon?

A. Limited amounts.

Q. Who sold them?

A. As far as we are concerned our salesman who handled this territory.

Q. Do you know to whom your salesman sold

them? Will you explain that, you said that you had allowed commissions to banks. Now, have you in mind any particular bank in this vicinity to whom you allowed a commission on the sale of those bonds?

A. No. The practice in our business is to have a retail price with a fixed discount to banking institutions. That is the general practice in the business.

MR. HERRING:

Q. When you examined the books of the bridge company to determine your offer on the purchase of the bonds, did you examine the earnings of the bridge company prior to their acquiring the bridge as a bridge company, or just from the time they became a bridge company?

A. We examined that over a considerable period of time, that is, the gross receipts.

Q. You examined it for the year 1914?

A. We accepted a report submitted by the company from the engineer which contained the figures. That report is in my files, and just what years are included I cannot say definitely, but it was for a period of years prior to 1924.

Q. Then your figures that you arrived at for the purchase of these bonds are based on figures prior to the Clark's Ferry Bridge Company being incorporated as a bridge company?

A. I don't know when it was incorporated as a bridge company.

Q. What I want to know specifically is whether you had examined the year 1914 in examining the records of the bridge company to determine the price to be paid for the bonds, their earnings?

A. I cannot answer your question, because I don't know. My impression is that the earnings record perhaps only went back four or five years. We would have considered that sufficient.

MR. ERY:

Q. What interest do those bonds bear?

A. Six per cent.

Q. You paid 86?

A. Yes, sir.

Q. Your approximate profit was 8 points, is that right?

A. At that price.

Q. Do you consider that bond speculative?

A. At the time we considered there were certain hazards there.

Q. Why?

A. Because the earnings had developed in a comparatively recent time, and there was not likely to be a great change in the volume of earnings over a period of years. We considered also the fact that there was not much of an immediate adjacent population, the bridge company was probably going to get a fair amount of its business from traffic that would be directed to it from certain highways, and it occurred to us that if in the next five or ten years the highway improvement should be reduced it might take away a considerable portion of the earnings of the bridge company. That was something that could not be guarded against, and we felt that there was perhaps some element of chance there.

Q. The determining factor in the purchase of the bonds to a great extent was the improvement of the Pennsylvania State Highways, is that right?

A. That was a factor.

MR. COBLE:

Q. You stated that in looking over the company's books you thought that the net earnings for that period of four or five years would be sufficient for you to base your judgment on with reference to submitting a bid?

A. Our bid was primarily based upon the earnings of the previous year. We assumed that the earnings would probably not go under the amount which they had amounted to in the previous year, and we utilized those figures.

Q. Do you recall what that figure was that you used?

A. I can tell you exactly if you will let me have a circular which Mr. Hull has.

MR. HULL:

Yes, here it is. (Handing circular to witness.)

THE WITNESS:

We used the gross revenue for the twelve months ending May 31, 1924.

MR. COBLE:

Q. What were those gross revenues?

A. $67,700.92.

Q. You say the gross revenue for the year 1924?

A. The twelve months ended May 31, 1924.

Q. Did you consider that one year sufficient on which to base your estimate?

A. It was not an estimate that we would perhaps under similar conditions accept. A one year statement of earnings is never a very satisfactory margin. We considered the development of Pennsylvania highways, and we felt that the traffic would

probably not decrease under the gross revenue, would probably not decrease under the revenue for that period. It was entirely too short a time to issue a security as a very high grade security, but we were, all things considered, willing to accept it.

MR. HERRING:

Q. In taking those bonds for sale, did you assume that the earnings of this bridge company, which naturally comes from vehicular traffic, primarily had come from the immediate vicinity served by the bridge, or from the traffic throughout the State?

A. We considered that that would come from both sources, but primarily from traffic at more distant points.

MR. EBY:

Q. You say that you base your estimate of your bid, or price, on one year's earnings, is that customary in your business?

A. I would not say it is either customary or desirable.

MR. EBY:

It is not desirable.

MR. COBLE:

Q. Was there any reason why you did not go back further? The figures surely were available if this company was willing to give them to you?

A. We had the figures, but we in these plans, we set our own figures for that year and then estimated the earnings in the future for the payment of interest on the bonds.

Q. Then these bonds were sold on the figures submitted to you by the bridge company showing

gross earnings for one year?

A. Our bid was figured upon earnings over a period of years, but the figures which intimately concerned us were the figures for the twelve months which we used, and which we established to our own satisfaction as being sufficient for the purpose.

Q. Did you consult the officers of the bridge company in turning those figures over to the investing public as a means of determining whether they should use those bonds for investment purposes or not?

A. I don't know that I understand your question.

Q. Did you consult the officers of the bridge company and get their permission to use the figures representing one year's gross earnings to submit to the investors as a means of their determining whether they should use those bonds for investment purposes or not?

A. The figures which we issued to the public were embodied in a letter which the president of the bridge company addressed to us, and which we understood was to be for public use.

Q. He mentioned only one year's gross earnings?

A. Looking at it hurriedly there is only one year referred to there.

Q. The point I am trying to make for the satisfaction of the Commission is that this bridge company had these bonds offered to the public on the basis of one year's gross earnings, notwithstanding the fact that we usually figure back for ten years in arriving at an average annual gross revenue.

MR. HULL:

If the Commissioner please, that certainly is not proper cross examination of this witness, that is argument.

(Argument off the record.)

THE COMMISSIONER:

You understand that the investing public is one to whom many things are offered. The Commission has nothing to do with their attitude of mind toward a bond issue. Do you know what I mean?

MR. COBLE:

Yes. As far as we are concerned we have finished questioning Mr. Parsly.

MR. HULL:

Q. One other question, Mr. Parsly. The Clark's Ferry Bridge Company had, just before the time of issuing this $450,000 worth of bonds, outstanding $50,000 worth of bonds. Did you or did you not insist that those bonds first be retired so that these bonds be secured by a first mortgage?

A. We insisted that they be secured by a first mortgage on the property.

L. A. REINHARD, a witness called in behalf of the respondent being duly sworn was examined and testified as follows on

Direct Examination

MR. HULL:

Q. Mr. Reinhard, where do you live?

A. Cumberland, Maryland.

Q. What is your business?

A. I am with the Vang Construction Company.

Q. In what capacity?

A. As auditor.

Q. How long have you been in that position?

A. Ten years.

Q. Was the Vang Construction Company the contracting company which constructed the new Clark's Ferry Bridge?

A. Yes, sir.

Q. Are you familiar, as auditor of the company, with the amount spent by your company for labor and materials in that structure, and the amount received by them from the Clark's Ferry Bridge Company?

A. Yes, sir.

Q. Will you state what was the amount actually spent by your company for labor and materials used in the construction of this bridge?

A. For all material, that includes everything that went into the bridge, was $414,455.90. The total of labor cost spent was $212,986.29, or a total of $627,442.19. Now, this item here does not include the overhead or depreciation on our plant, this was actually complete cost.

MR. HULL:

Mr. Commissioner, I understand Mr. Parsly made one mistake in his testimony, which he would like to correct.

THE COMMISSIONER:

Very well.

MR. HULL:

Mr. Parsly, you gave the figure at which you purchased these bonds as 86, I believe?

MR. PARSLY:

Yes.

MR. HULL: Was that correct?
MR. PARSLY: It should have been 87.
MR. HULL:

Q. Now, Mr. Reinhard, your total spent for materials and labor was $627,442.19?

A. Yes, sir.

Q. How much did you receive from the bridge company?

A. $566,301.29.

Q. Have you computed the difference between those two figures?

A. Yes, sir.

Q. What is it?

A. $61,140.90.

Q. Is that the loss which you sustained from labor and materials alone?

A. Labor and materials alone, that is actual cost of the job.

Q. Now, in addition to that will you state approximately the amount of your loss on overhead, depreciation of plant and that sort of thing?

A. They lost about $82,000, the best I can recall it. According to our books we wrote off a loss on this job of about $141,000 to $142,000. Of course, that is a question I did not look up before I came over here, but I know it was 140 thousand some dollars as far as the book loss was concerned, that includes depreciation and overhead, that $82,000.

MR. HERRING:

Q. Total loss?

A. Total loss, book loss.

MR. HULL:

Q. So that the book loss that you refer to in-

cludes what you have set aside as loss on labor and materials, and the loss—

A. Of overhead and depreciation on plant which comes off as a general thing from all jobs, you see.

Q. Now, in addition, Mr. Reinhard, will you state what was a fair contractor's profit upon this job?

A. Well, if we make 10 per cent we are satisfied.

Q. Is 10 per cent the usual contractor's profit upon a job of this kind?

A. It is.

Q. That would amount in figures to how much in this case?

A. Well, around $70,000. Of course you have got to take what we spent there, and your overhead and depreciation, everything totaling up there about $709,000. You could call it in round figures $70,000.

Q. You figure that the profit you should have made and which you didn't make was about $70,000?

A. Yes, if you would make 10 per cent on your investment.

Q. That is actually a little less than 10 per cent?

A. Yes, sir.

Q. Your loss, your total loss then including book loss which you cross off and charge off, and the loss of your profit made a total of about $213,140.90, is that correct?

A. Yes, sir.

Cross Examination

MR. COBLE:

Q. Does your company make a profit on every job that it constructs?

A. Not when you bid on it as a contractor.

Q. Then, will you explain to us how you arrive at this 10 per cent usual profit that you stated you estimate?

A. When you go into it that is the usual profit that a man would make. We try to make that on every job. Sometimes all right. That is the usual profit that we enter into a contract for on a cost plus basis, it is 10 per cent or better. We have gotten as high as 20 per cent, we have gotten 15 per cent, very seldom we will ever take any less than 10 per cent.

Q. But you are content with 10 per cent profit on a particular job?

A. Oh, yes, very much so.

Q. And the jobs on which you lose money then reduces the profit on the total number of jobs that you have?

A. Well, yes, but there are very few jobs you lose money on, so far in our business it has been that way.

Q. How does it happen then that you lost money on the Clark's Ferry Bridge?

A. On the 28th day of September, if you remember there arose a flood, one of the highest waters they had in September. We figured on getting out of the river before any high water, of course, we had some high water to our sorrow, and this is the tale, we would have made money probably if things would have gone along smoothly without any high water. We had high water in July, another unusual thing in this river.

Q. Then the cost to you over what would ordi-

narily have been your cost was due to an unforeseen high state of the river?

A. Yes, it would have been to anybody.

Q. And in your opinion does that materially add to the value of the Clark's Ferry Bridge?

A. Yes, sir.

Q. That there was high water on a particular day?

A. Yes, for this one reason: If these gentlemen were building this bridge themselves, or if they would let it on a contract at a cost plus and fee, which probably they might have done, you never can tell what people will do when they start on a job of that kind; that is one loss that they would have had, that they would have suffered on the job in any event.

Q. You live in Cumberland, Maryland, and perhaps are not thoroughly familiar with the different stages of the Susquehanna River, but in your opinion, are there times during the year when the bridge could have been constructed when there was no danger of loss of materials through high waters?

A. Not as well as at the time we entered the bid, or right before the bid, that was the best time of the year. We studied the river and found, even before we bid on the job, and we found that that was the best time of the year to do it.

Q. You got a bonus of $150 for every day before the end of the contract that you finished the bridge?

A. Yes, sir.

Q. Did that bonus enter into your construction?

A. No, it was to get away, that is, to get done. We looked for the bonus, anybody is going after

that money, we all do it, but that was not the main thing, it was to get away. The longer we were working there the more money we would have to continue to put in our plant, keep it tied up, and our overhead running on.

Q. Did the bonus in any sense of the word have anything to do with the speed with which you were pushing the work?

A. We wanted to get out of there. We were working in the wintertime to get out of there, our idea was to finish.

Q. That is, the bridge cost approximately how much in excess of the figure of $566,301.29, that you were paid?

A. Cost $61,000.

Q. $61,000. Did the bridge company ever make up to you any part of your loss?

A. Only our bonus for finishing the bridge before time.

Q. So that $566,000 includes the bonus?

A. Includes the bonus.

Q. So that the actual cost to the bridge company is $566,301.29?

A. That is the money they paid us.

MR. EBY:

Q. How much was the bonus?

A. $22,050 I think it was, something like that, I am not just positive.

Q. What was your loss at $150 a day?

A. What was our loss?

Q. Did you lose anything on it, unless you built the bridge before a certain date?

A. They would have held $150 a day from the

contract price.

Q. Did you lose anything?

A. No, we built it ahead of time.

Q. The bonus was $22,000?

A. Yes, I think we finished something like 147 days ahead of time, I am not sure.

Q. 147 days ahead of time?

A. Something around there, around 147 days.

Q. You did that in order to get the bonus in your rushing the work to complete it as fast as possible?

A. Naturally—

Q. And to do it you took a loss of $213,140.90, is that right?

A. What was that?

Q. You took a loss of $213,140.90 to gain the $22,050?

A. We didn't sustain that loss, I said $70,000 was figured in there as anticipated profit, in that amount of money.

Q. What is the rest of the figure then, that is, the anticipated profit was $70,000?

A. $70,000.

Q. What is the rest?

A. $82,000 there for overhead and depreciation of plant.

Q. That was not, of course, figured in the contract at the time you made the bid?

A. When we figure on a job you must understand we had to put more plant on there, we lost the old plant at the time of building, and all that depreciation on that equipment you have got to figure into the price.

Q. Depreciation on your equipment was not fig-

ured in the original estimate?

A. Of course it was.

Q. Is the depreciation on your equipment $82,000 then?

A. No.

Q. Overhead and depreciation?

A. Yes, that is it.

Q. What is the rest of your amount?

A. $61,140, that is the complete loss.

Q. What is that for?

A. Well, we spent that much more for labor and materials than we received from the Clark's Ferry Bridge Company for building that bridge. In other words, we got that in a monument up there.

MR. COBLE:

Q. What was the contract price in the contract, do you know?

A. The contract price was about $501,000, if I am not mistaken, I am not positive.

Q. $501,546?

A. Something like that. I know it was around $500,000.

Q. What is the reason for the difference between the contract price of the bridge and the amount paid your company, the company paid $566,301.29?

A. Well, like on all contracts when you enter into it the engineering has a lot to do with it. A change in the depth of your foundation may change the price of your contract. There are many things that were not figured in, the approaches were not figured in, the buildings that were put on the other side of the bridge, I could name a dozen others. Most of the foundations were changed, and it is an approxi-

mate figure that you bid on, those figures can change, because it is bid on a unit price, so much per yard.

Q. Three things I want to get definitely fixed in my mind, this figure of $501,546 is the bid that the bridge company accepted as the contract price at the time you bid, did the estimate include depreciation on your equipment, and your anticipated 10 per cent profit, it did, did it not?

A. Yes, sir.

Q. And the bonus was in a measure an incentive for you to push the construction of that bridge notwithstanding the fact that you were likely to be overtaken by high water?

A. Well, yes, sure, the bonus I would say was an incentive to get through, but regardless of whether there was a bonus or not, our object was to get away.

Q. So that the contract price, depreciation and material which you anticipated, the profit that you anticipated making, added to that contract price is the bonus provision which gave you the incentive to disregard the danger of high water?

A. Yes, sir.

MR. EBY:

Q. The north side of the approaches were not constructed under this contract, were they?

A. No, sir.

Q. Who constructed them?

A. Oh, I don't know. They were not constructed under this contract, and there is where the price jumped.

Q. Why?

A. That was not in the contract.

Q. How much did it jump?

A. That is more than I can tell you.

Q. The contract price of $501,546 includes the finished bridge, even the north side of the approaches, is that right?

A. It included the complete bridge, if I can recall, it was some kind of asphalt before, and it was changed to concrete. The figures on the concrete alone there were changed, and different things changed, costing them additional money, and there is where some of that money comes in, the difference between $501,000 and $566,000.

Q. You don't know the cost on the north side of the approaches?

A. No, I cannot carry all that stuff around in my head.

Q. Let me get this figure once more, $22,050 was the amount of the bonus?

A. $22,055 I think it was.

Q. Which price was obtained because you finished the bridge 147 days before the contract date, is that right?

A. We had been on the job, you see—

Q. Answer that question, that was because you finished the bridge 147 days before the contract date, is that right, the date of the expiration of your contract, is that right?

A. Yes, sir.

MR. HERRING:

Q. When your company builds bridges and earns a profit and not a loss, as in the case stated in the Clark's Ferry Bridge, would you say that the value of that bridge, due to the fact that you earned money

on it, or else money on it was lost as you have said here, because of the loss this value increased?

MR. HULL:

If the Commission please, we object to asking this witness his opinion of value. That is not the question. This man's opinion on the value does not help us a bit, and is not competent or relevant in this hearing.

MR. HERRING:

I will ask the question differently, maybe it will be satisfactory.

MR. HERRING:

Q. When your company in its regular business of building bridges, construction work, they don't consider their loss on one particular job, they add all the jobs together for a period of a year and figure their yearly earnings from all the jobs, and not for any single unit in that year?

THE COMMISSIONER:

I don't see, Mr. Herring, what bearing that has on this question.

MR. HERRING:

This bearing, as I see it. This witness on the stand tried to convince the Commission—

THE COMMISSIONER:

Tried to do what?

MR. HERRING:

Convince the Commission that due to the fact that a loss in the construction was sustained by the contracting firm, that loss to the construction company should be applied to the valuation of the bridge in determining the value of the bridge. The value of the bridge is what the firm paid for it, and not

added to it what the contractor lost in its construction, and they are trying to show that the contractor's loss is part of the value of the bridge.

THE COMMISSIONER:

I do not see that the point that you are trying to make has any bearing here.

MR. HERRING:

All right then we are done with the witness.

Redirect Examination

MR. HULL:

Q. Mr. Reinhard, that was a unit price contract?

A. Yes, sir.

Q. And if you had been required in the actual excavation of the work to construct no more units than were provided for by the original contract, and if there had been no flood, then you would have come out on your bid of $501,000?

A. We figured that way, yes.

Q. But due to the changes in the construction, during the course of construction, you were required to construct more units at the contract price than was originally contemplated?

A. Yes, sir.

FRANK M. MASTERS, called on behalf of the respondent, being duly sworn, was examined and testified as follows on

Direct Examination

MR. HULL:

Q. Your name is Frank M. Masters?

A. Yes, sir.

Q. What is your profession?

A. Consulting engineer.

Q. Where is your office?

A. Calder Building, Harrisburg.

Q. What was your professional training?

A. I studied engineering courses and have been for twenty years associated with Mr. Ralph Modjeski, a prominent bridge engineer, and for ten years I have been in private practice, associated with him on various projects.

Q. You are a member of what professional societies?

A. American Society of Civil Engineers, American Society of Testing Materials, Franklin Institute and others.

Q. Have you heretofore had any experience in valuing toll bridges?

A. Yes, sir.

Q. What has been your experience?

A. I made valuations of the railway bridges, the toll bridges, highway bridges, of the Terminal Railway Association of St. Louis over the Mississippi River. That's one of the largest projects.

Q. For what purpose?

A. Rate making purposes, before the Interstate Commerce Commission.

Q. Before the Interstate Commerce Commission of Washington?

A. Yes, sir.

Q. You were also the engineer who designed and supervised the construction of the Clark's Ferry bridge?

A. Yes, sir.

Q. That is, the new bridge?

A. Yes, sir.

(Blueprint entitled "Clark's Ferry Bridge Across the Susquehanna River 14 Miles Above Harrisburg, General Plan", produced and marked, "Respondent's Exhibit No. 4, 10-23-25, L. T.")

Q. I show you, Mr. Masters, Respondent's Exhibit No. 4, and ask you to state what that is?

A. A general plan of the bridge, with the outlines of the property of the Clark's Ferry Bridge Company.

Q. Now, I call your attention specifically to the western approach to the bridge—

A. We call that north.

Q. North, the northern approach to the bridge—and ask you to indicate where the property lines of the Clark's Ferry Bridge Company run?

A. As shown on these plans, you will find a faint line—I am sorry it did not show up better—with the directions, metes and bounds indicated on it, which embraces the portion of the property of the Clark's Ferry Bridge Company, but does not cover all of that portion recently acquired.

Q. The faint line to which you refer leaves the water's edge just below the lines indicating the present bridge structure and proceeds away from the water's edge to the line of the highway?

A. Yes, sir.

Q. From the line of the highway, where does the property line run?

A. It turns to a point across the road at the intersection of the two highways.

Q. From that point (indicating on Respondent's Exhibit No. 4) the line runs upwardly and by irregular courses and distances to another point at

the water's edge?

A. Yes.

Q. Now, the land embraced within that line and the water's edge is owned by the Clark's Ferry Bridge Company, is it not?

A. It is.

Q. In addition to that, there is a piece of property lying immediately north, the metes and bounds of which are not shown on this map; is that correct?

A. Yes, sir.

Q. Now, I call your attention to the southern approach to the bridge and ask you to indicate where the old property lines of the Clark's Ferry Bridge Company are shown on that?

A. The old property line starts at the western side of the old abutment and runs in a southerly direction to the highway, and then it turns west and by various courses runs, I think, some four or five hundred feet to the boundary of the property of Baron Von Bestecki. Then it turns toward the river and is bounded by the river, the balance of the property.

Q. There are other faint lines running up to two circles—

A. Yes. That indicates the boundary.

Q. East of the old bridge structure?

A. Yes.

Q. Do those lines indicate the boundaries of the Bridge Company's property?

A. They do.

Q. Now, in addition to that, there was purchased a small piece of property, west of their original

holdings, upon which is now located the approach to the new bridge; is that correct?

A. Yes, sir.

MR. [redacted]ULL:

Now, if the Commission please, we have a witness who is familiar with the value of real estate and who is here to be called only to testify as to the value. Without going further with this witness, we desire to call a Mr. Steward for that purpose, and we will then continue our examination with Mr. Masters.

COMMISSIONER STEWART:

No question about that.

RAY E. STEWARD, called on behalf of the respondent, being duly sworn, was examined and testified as follows on

Direct Examination

MR. HULL:

Q. Mr. Steward, where do you live?

A. Harrisburg.

Q. What is your business?

A. River coal operator.

Q. Do you own any property at or near the property of the Clark's Ferry Bridge Company?

A. I do.

Q. Do you know of purchases and sales of property made in that vicinity for some time past?

A. I do.

Q. And you are familiar with the values of property in that locality?

A. I am.

Q. You are familiar also with what property is

owned by the Clark's Ferry Bridge Company, are you not?

A. Very well.

Q. Now, calling your attention particularly to the property which the company owned before it constructed this new structure; that is, its original property, both on the north and the south sides, it appears from an estimate of valuation which will be put in evidence in this case that the officers of the company estimate the value of that real estate at $10,000.00. Will you state whether or not, in your opinion, that is a fair and reasonable value for that real estate?

A. You mean the property that was held by the bridge company prior to recent acquisitions on both sides of the river?

Q. No yes, prior to the recent acquisition?

A. Can you tell me as to what property they owned on the east and west side of the river?

Q. Yes. I thought that you were familiar with that.

(Informal discussion between counsel and witness centering about Respondent's Exhibit No. 4.)

A. I feel that the $10,000.00 would be about the value of that property several years ago. To my mind, it would be worth more than that today.

Q. Now, Mr. Steward, the company since acquired a piece of property on the north side; that is, toward the Juniata River, they recently bought a piece of ground, fronting about 100 feet on the highway right at the approach to the bridge and extending back about three hundred feet, for which they paid $2,000.00. Will you state whether or not, in

your opinion, that was a fair purchase price for that amount of property in that locality?

A. That was a very small price for that property. It's worth more than $2,000.00.

Q. On the opposite side of the river, they purchased from the Pennsylvania Railroad a fan-shaped piece of property, roughly indicated by the pencil line upon Respondent's Exhibit No. 4, for which they paid $350.00. State whether or not, in your opinion, that is the fair value for that piece of property?

A. Very fair.

Q. By that you mean, very reasonable?

A. Very reasonable. I would have been glad to give more than that for it.

Cross Examination

MR. EBY:

Q. Mr. Steward, where do you live?

A. Harrisburg.

Q. How long have you—where do you operate your fleets of boats? You have coal barges, you say?

A. Yes.

Q. Where do you operate them, usually?

A. From Middletown to north of Clark's Ferry.

Q. How long have you operated them in the vicinity of Clark's Ferry?

A. About five years.

Q. You say that you believe that the value of $10,000.00 for property seven years ago is very reasonable, if you have operated five years at Clark's Ferry; is that right?

A. Will you repeat that question?

Q. You say that a value of $10,000.00 on property prior to the acquisition of new property by the

Clark's Ferry Bridge Company was reasonable seven years ago; is that right?

A. I didn't say seven years ago; I said several years ago.

Q. Pardon me, I thought you said seven years ago. What is the land worth an acre in that vicinity, Mr. Steward?

A. Land in that vicinity is not sold by the acre. There is not enough of it there to consider it by the acre. You value your land in that neighborhood by the distance you have frontage on the road or on the river. Your two points of value are your road frontage and your river frontage.

Q. What is the river frontage land worth?

A. Well, on the south side of the river—that's this side—land value for coal purposes would be as high as 30 to 40 dollars per foot front.

Q. And what are they worth a front foot on the highway?

A. The land there is very narrow, and it's really a question of whether there's anything more than the landing north of the Clark's Ferry Bridge. It's merely a strip of ground that may be 15 feet wide and it may be 50 feet to the low-water mark.

Q. Well, what are the values based on up there?

A. The value up there is based on the land for river coal landing. That's merely the space you have to get against the shore for unloading your coal.

Q. On what do you base your estimate of the value of this Clark's Ferry Bridge Company's property prior to the acquisition of their recently acquired property?

A. On the values of property in Benvenue.

Q. How are the values of property in Benvenue gauged, Mr. Steward; by the front foot or what?

A. Well, they are not sold, as a rule, by the front foot in that territory; they are not gauged that way. They are sold so much for a plot. I have a property which is adjacent to the holdings of the Clark's Ferry Bridge Company. It has a frontage of 130 feet, a very modest house on it, and I was recently offered $6,000.00 for it and I wouldn't let it go under $7,500.00.

Q. Well, Mr. Steward, if I, as a stranger, should go into Benvenue and offer to buy property, how would they sell it to me; by the front foot or by the acre? What would be the basis of estimating a plot of ground for me to buy, for you to sell? What would be the basis of estimating that ground; by the front foot or by the acre?

A. Well, it's sold there mostly by the property lines. I can't describe it either by the acre or by the front foot.

Q. Well, then, what do you base your valuation on, if you can't base it on a unit of measurement?

A. Well, you base it on its location, its value from that standpoint.

Q. How much property does the Clark's Ferry Bridge Company own there? How much did they own prior to the acquisition of the recently acquired property?

A. You mean, on the Benvenue side of the ?

Q. The property that you estimated a value of $10,000.00 being very fair. What is the river frontage of that property?

A. The river frontage on that side I would say would be over 300 feet.

Q. What is it on the other side?

A. I should judge about 400 feet. That's before they bought the last sections.

Q. And how many front feet of property on the highway do they own that would be inclusive with this $10,000.00 estimate that you have said is very reasonable, prior to the acquisition of their recent property?

A. It would be hard to say how much highway is on that, because the highway cuts into it from both directions. There would be more highway on it than river frontage.

Q. Mr. Steward, that is in Perry County, isn't it?

A. No, sir; that's in Dauphin County.

Q. What is the tax rate? What do you pay up there on that plot of ground that you own?

A. What do I pay?

Q. That is, what is your rate?

A. I guess I must be rather ignorant; I don't remember the tax rate.

Q. Well, then, you are not a real estate expert, are you, Mr. Steward?

A. No, I am not a real estate expert.

MR. EBY:

That's all.

THE WITNESS:

I haven't asked to be classified as a real estate expert.

COMMISSIONER STEWART:

All Americans are real estate experts.

MR. COBLE:

Q. Mr. Steward, you have estimated that a certain piece of property up there is worth so much money. Now, you do not have a unit of measurement by which you can arrive at the value, so we believe then that the next thing to take is the taxes that are paid. If you haven't any means of fixing any unit of measurement as to the value of this property, it is quite probable then that the assessor has. If his assessments were very much unfair, the people on whom those assessments were levied probably would have registered a complaint. Now, you have a property of a certain frontage on the river which has been assessed at so much by the tax collector, has it not, or the assessors? Now, if you can tell us what that tax is, then from that we probably can arrive at some fair value of that property. If you don't even know what the tax is, then we are obliged to conclude that you don't know much about real estate.

MR. HULL:

Now, if the Commission please, that is entirely unfair. It is not a question of what is the tax paid nor the assessed value. This witness has testified as to what he holds his property at which is immediately adjoining this property of the Clark's Ferry Bridge Company, and he has also testified that river frontage along this river is worth 30 to 40 dollars a foot front and that he is familiar with the prices at which land is bought and sold in that district. Now, in view of those facts, he is entirely competent to testify as to the value of the property of the Clark's Ferry Bridge Company, and the fact

that he does not know what particular tax he happens to pay on his property or what the assessed valuation of it was is entirely irrelevant and immaterial and inadmissible here.

COMMISSIONER STEWART:

Q. Mr. Witness, you are familiar with land sales in that neighborhood, are you?

A. Mr. Commissioner, if I may clarify the situation, I would like to say that I recently owned the property to the down-river side of the bridge company's property, and still own the property to the north side of it; that I bought the property to the south side of it some three or four years ago and sold it within the last year; that all the property in that neighborhood is so cut up in twists and turns and angles that there's no way to get at the foot frontage.

Q. You mean, it's due to the shaping of the valley and the plots?

A. To the shaping of the Juniata River coming down one side, your Susquehanna up the other, your roads coming in several different directions, cutting the depth of a plot—it may be 300 feet deep in one place and only 100 feet in another. You can't arrive at either a foot front basis or an acreage basis. There's only one or two plots that amount to anything, that run nearly an acre or over an acre. The rest are all small sections, to the extent that property isn't gauged there like it is on a broad expanse of land in a city, where depths run regular and frontage runs regular. From my knowledge of what I sold this property for and what I had to pay for it—

Q. You think that was a reasonable sum to pay for the other?

A. I certainly do.

COMMISSIONER STEWART:

Well, I think that's sufficient.

MR. EBY:

If the Commission please, the asking price asked for a piece of property, I don't think, Mr. Commissioner, is a fair determination of the value of that property, is it?

COMMISSIONER STEWART:

Well, I am not on the stand. The witness has answered the question sufficiently from his point of view.

MR. HERRING:

Q. Mr. Steward, didn't you base the value of this property at $30.00 or $40.00 a front foot principally on the river coal proposition and not on its value as a residential plot?

A. The property on which I placed a value of $30 or $40 per foot front was property on which you couldn't build a house. It certainly was for river coal purposes. That was only on the south side of the river. That property runs in width anywheres from 15 to 50 feet and is merely the bank of the road going along there.

MR. COBLE:

Q. Are there any other places along the river where you could conveniently land river coal, or is this the most advantageous point?

A. The back-water of the dam, what is left of it there, permits you to operate barges at nearly all seasons of the year, and the most advantageous

point would be in that deep water above the dam, running from the breast of the dam for about one mile. That's the most valuable ground there.

Q. Would any portion of that serve your purpose, any portion of that land?

A. Certain portions of it serve your purposes better than others.

Q. And you own those portions that serve your purpose best?

A. I own no land on that side of the river. I leased about six or seven hundred foot frontage and pay $450.00 per year for that frontage. Now, if you want something to figure it out, you can figure back on that as to the value of the ground on that side of the river.

MR. EBY:

Q. You pay $400.00—

A. Four hundred and fifty dollars per year rental on three plots that run in the neighborhood of 700 feet.

MR. EBY:

That's all.

FRANK M. MASTERS, recalled on behalf of the respondent, was examined and testified as follows on

Direct Examination

MR. HULL:

Q. Mr. Masters, the Clark's Ferry Bridge Company is located where? I mean the bridge?

A. The bridge is about fourteen miles above Harrisburg on the State highway over the Susquehanna River.

Q. And extends from the south side or Harrisburg side of the river across to the penninsula formed by the Juniata and Susquehanna Rivers?

A. Right.

Q. What highways lead to and from the southern and the northern approaches of this bridge?

A. I don't remember all of the route numbers. There's the William Penn and the Susquehanna and—

Q. Well, there's—

A. And another highway from Harrisburg, which I think was started through to Pottsville but runs only as far as Millersburg.

Q. There is a highway running from Harrisburg to Clark's Ferry?

A. Yes.

Q. And that highway continues on the same side of the river north of Millersburg?

A. Yes.

Q. On the opposite side of the river, there is a highway from the bridge approach north, through Liverpool to Sunbury?

A. There is.

Q. And some distance north of the approach that road conterforks and a highway extends over to Newport and Millerstown?

A. Yes.

Q. Now, there is also a highway which runs southward or southwestward from the bridge approach, across the Juniata River, through the borough of Duncannon and southward along the western side of the river to a point opposite Harrisburg?

A. Yes, sir.

Q. There is also a highway leading from Duncannon over to New Bloomfield?

A. Yes, sir.

Q. There is also upon the State Highway plan a primary highway to be constructed running from Newport through New Bloomfield and Sterretts Gap and Carlisle and Gettysburg south to Baltimore?

A. Yes, sir.

Q. What is the population of the territory within a radius of about five miles of the Clark's Ferry bridge, roughly?

A. I don't know. I would put it at three thousand.

Q. Is that a metropolitan area or a rural area?

A. It is a rural area.

Q. Now, prior to the construction of the present Clark's Ferry bridge, there was a bridge there which we shall hereafter refer to as the old bridge. Will you describe that bridge?

A. Well, it was an old combination truss and arch construction, one of the oldest wooden bridges in the country. It consists of ten spans, supported on stone piers, with stone abutments, and nine of the spans were 212 feet long, I believe, and the other 166 feet long, giving a total length of 2,074 feet, face to face of the abutments. It was a covered bridge, constructed many years ago to carry ordinary highway traffic, vehicular traffic.

Q. Was it a one-way or a two-way bridge?

A. It was originally built for a two-way bridge.

Q. As used between 1915 and 1925, was it a one-way or two-way bridge?

A. It was restricted to a one-way bridge.

Q. For what reason?

A. On account of its weakness. It was not strong enough to carry modern highway traffic.

Q. Now, will you give us a general description of the new structure?

A. The new structure consists of 15 concrete arches, open spandrel type of construction, with a 20-foot wide clear roadway and it has about a four-foot wide clear sidewalk on the upstream side. It has a total length of 2,088 feet, face to face of the abutments, and a rather extended approach—elaborate approaches on each end.

Q. Mr. Masters, state when and for what purpose you were first professionally consulted by the Clark's Ferry Bridge Company?

A. I cannot recall the exact date. I guess it was some time in 1922 that Mr. Jennings asked me if I wouldn't look over the old bridge and tell him if it was safe to open it up for two lines of traffic. He thought he saw the day when the bridge could not accommodate the traffic.

Q. Did you at that time or subsequently make a study of the physical property of the company which it then had?

A. I made a complete study and inspection of the old property and gave him a very, I believe, complete report on the entire subject.

Q. Did you make an estimate of the value of that structure upon one or more bases?

A. After I had told Mr. Jennings I wouldn't put my name on the dotted line to say it was safe to open the old bridge for heavy highway traffic loads, he asked me to make such a study, and I made

a study of three different types of construction.

Q. Subsequent to that study, they adopted the concrete type of construction?

A. They did.

Q. Employed you as the engineer?

A. They did.

Q. You designed the bridge?

A. I did.

Q. Superintended it and supervised its construction?

A. Yes, sir.

(Statement entitled "Reproduction Cost New of Present Clark's Ferry Bridge Structure" produced and marked "Respondent's Exhibit No. 5, 10-23-25, L. T.")

Q. Mr. Masters, what is the reproduction cost new of the new Clark's Ferry Bridge structure?

A. You mean, of the actual physical property or the entire property?

Q. I mean of the physical property, without any allowance for working capital, value of location or going concern value.

A. $1,019,993.17.

Q. That is made up of what items?

A. That is made up of the actual cost of the new bridge, the value of the old bridge—

Q. Just give the amounts as you proceed?

A. The actual cost of the construction of the new bridge was $754,751.07; the value of the old bridge, depreciated, which was transferred and used in the construction of the new bridge, $52,101.20; there's an item of the loss sustained by the contractor upon labor and materials actually used in construction,

$61,140.90; the contractor's overhead, depreciation and plant charge of $82,000.00, and fair profit to the contractor of $70,000.00, which makes a total of $1,019,993.17.

Q. Those are the items shown upon Respondent's Exhibit No. 5?

A. Yes.

(Statement entitled "Estimate of Cost and Valuation, New Clark's Ferry Bridge, September 30, 1925," produced and marked "Respondent's Exhibit No. 6, 10-23-25 L. T.")

Q. Now, Mr. Masters, you prepared the specifications for this bridge, the contract and the proposal for bidders?

A. Yes, sir.

Q. And the contract, as has been said here, was a unit price contract?

A. Yes, sir.

Q. Now, to whom was the contract awarded?

A. The Vang Construction Company.

Q. Now, after the contract was originally let, state what changes, if any, became necessary in the plan during the course of construction?

A. We started work very promptly after letting the contract, and the first thing required certain elevations to be determined for the contractor to set the levels for his plant, and in fixing these elevations on our accurate surveys we discovered that the original data, information, furnished us by the State Highway Department was in error. In making the plans for this bridge, in studying the high water elevations, which was data accumulated from the State Water Supply Commission, based on mean

sea level gauges, we had fixed certain heights for the elevations of the springing lines of the arches to keep them out of danger of ice floods, and in fixing our bench marks for elevations at Clark's Ferry we used the plans furnished us by the Highway Department and their bench marks. Then when we went up there and started work, we discovered that the Highway Department had changed the elevation of this road nearly two feet—a matter of 1.93, to be exact—and had not changed its plans, so that all of our plans were in error by a matter of almost two feet in elevation. We went to the railroad, Pennsylvania Railroad, located their mean sea level bench marks and used that in fixing our elevations, and found it necessary to raise the ends of the bridge, which greatly increased the cost of construction. It also made it necessary to entirely change our plan of approach, especially on the Harrisburg end, so that it became necessary to get special dispensation from the Highway Department to raise the elevation of the highway and repave it and do a considerably greater amount of work than had been contemplated in the original plans.

Q. The raising of the bridge 1.93 feet was necessary in order to get above the water level, as you originally intended in your original plan?

A. Yes, sir.

Q. And it was due to an error in the plans of the State Highway Department?

A. Yes, sir.

Q. Discovered subsequent to the letting of the contract?

A. Yes, sir.

Q. And the change in the height of the bridge and the consequent necessary changes in the approaches were responsible for the additional cost in the construction of this bridge?

A. Not for all of it. There were other items imposed upon us by the State Highway Department that added considerably to the cost.

Q. What were they?

A. On the north approach, they insisted on our joining their highway under certain conditions which would be suitable for traffic, which necessitated our tearing up a lot of their highway that they had already put down and replacing it with new paving, and they would not pay us for any of that; we had to do it all out of the funds of the bridge company.

Q. Was any such construction necessary on the north side?

A. We raised and repaved the highway on the north side for a matter of some five or six hundred feet.

Q. Was that work done by the Vang Construction Company?

A. They did all of that work.

Q. Now, I call your attention to Respondent's Exhibit No. 6. Upon that exhibit, as the first item under the cost of construction, is new concrete bridge and approaches, paid Vang Construction Company $566,301.29. That represents what?

A. That represents the actual amount paid the Vang Construction Company for their work in the building of the new bridge.

Q. Including the bonus paid?

A. Including the bonus paid.

Q. The next item is the construction of toll houses, paid J. Frank Saussaman, $3,000.00. Who is J. Frank Saussaman?

A. He is a local contractor here in Harrisburg.

Q. Awarded the contract for the construction of these toll houses?

A. For the finishing of the toll houses. The walls of the toll houses were placed and boarded by the Yang Construction Company, and they are a part of the $566,000.00 item, and Saussaman put on the roofs and finished the inside and did all the finishing work, plumbing, lighting, sewage and things like that.

Q. Now, he was actually paid how much?

A. Well, at the time this statement was made, he had actually been paid $3,000.00, and there was an estimate of $859.27 due him on his bid price. Since the time of this statement, that matter has been increased a little bit for some extras, I think a matter of some $130.00.

Q. So that, under his contract, you either have paid or will pay him for his work upon the toll houses something in excess of $3,859.27?

A. Yes, sir.

Q. Before leaving the toll houses, where are they located?

A. They are located on the approaches to the bridge.

Q. On which side?

A. On the north side.

Q. The next item is the new superintendent's house. Where is that located?

A. That is located on—well, it is directly oppo-

site the north end of the bridge, on the property along the highway route.

Q. Is that located upon the piece of property newly acquired by the bridge company?

A. Yes, sir.

Q. And is just north of the north approach?

A. Yes, sir.

Q. What does this figure, $5,673.93, for the new superintendent's house represent?

A. That represents the cost of that house and the fill around the property, the total construction cost.

Q. Was it a new house constructed?

A. Yes, sir.

Q. And the total cost of the fill and the construction of the house was this figure?

A. Yes, sir.

Q. Who built it?

A. I don't recall. That was let by the owners to a local contractor up there.

Q. The next item is an item for moving houses on the north approach, $3,470.82. What was that item expended for?

A. In laying out the north approach to meet the requirements of the Highway Department and others who wanted proper join-in with the approach to the Juniata Bridge, it was necessary to move an existing house. I think it belonged at that time to Ray Steward, who just testified, and it had to be moved to the other side of the road in order to make room for the approach roads to the bridge.

Q. Now, referring to Respondent's Exhibit No. 4, which is the map, in evidence, will you state

whether or not the dwelling which was moved is indicated on that map?

A. It is indicated in dotted lines as an "Old Dwelling."

Q. And is that the one the lines of which extend partly over the highway?

A. Yes, sir.

Q. It was moved to where?

A. It was moved to a position across the highway and almost directly opposite its present location.

Q. On the north side of the highway?

A. On the north side of the highway.

Q. There is another dwelling on the eastern side of the present approach, the outlines of which extend over the highway. What was done on that dwelling?

A. An old frame dwelling. That was the old toll house and the office of the bridge company, and it was taken down and the new house built to take its place.

Q. And the cost of taking that down is not included, then, in the moving cost?

A. I don't believe so. The owners did that work.

Q. All right. Now, the next item, Mr. Masters, is one of $545.40 for electric signs. What were they?

A. That is the cost of the signs, the metal signs, on the approaches to the bridge, highway direction signs, put up under the approval and at the direction of the Highway Department.

Q. The item of $336.10 for electric conduits includes what?

A. That covers some conduits buried in the ap-

proaches to the bridge that carry light and telephone wires and similar items.

Q. The item of $75.64 for manholes includes what?

A. They are manhole covers to get access to the conduits on the bridge.

Q. The item of $1,417.25 for lights on signs includes what?

A. That's the item of cost of the two large lanterns, signal lights, on top of the signs at the ends of the bridge.

Q. Do you recall from whom they were purchased?

A. Smyser-Royer, in York, Pennsylvania.

Q. Were the plans for those approved by the State Highway Department?

A. Yes, sir; the plans for all that construction were approved by the Highway Department.

Q. The item of $90.99 for electric bulbs includes what?

A. They were purchased for the bridge lights.

Q. $500.00 for reflector hoods includes what?

A. They are reflector hoods that are not working very successfully over the signs; supposed to light the signs.

Q. Above the signs?

A. Above the signs, yes.

Q. There is an item of $315.50 for reflectors and flashing switch. What is that?

A. The Highway Department wanted an intermittent flashing light on these large lights on top, and this item represents the cost of that switch, and then in these reflector hoods there are some mirror

reflectors to direct the light down on the signs, which they don't do. That covers that item.

Q. Is that on one side or on both sides of the bridge?

A. That's on both sides of the bridge.

Q. There is an item of $6,479.54 for lanterns, marked estimated. What does that include?

A. That's the contract price with the Westinghouse Electric and Manufacturing Company for the furnishing of all of the lanterns on the bridge, exclusive of these signs, lights on the signs, and it has not been paid, inasmuch as the work is not entirely completed to my satisfaction, and I don't know the exact amount of dollars and cents they will be paid in settlement. It may be a little more or a little less than that item.

Q. There is an item of $88.06 for a power connection. What is that?

A. That's what it cost us to secure a service connection to the existing lights, furnishing electric current for lights across the bridge and in the toll houses.

Q. And what is included in the item of $1,070.00 for light standard wiring?

A. They are the wires that were put on the bridge to furnish current to light the bridge lights.

Q. What is the item of $79.97, marked as lamp standard changes and incidentals?

A. Well, it was necessary to make quite a few corrections in those lamp standards furnished by the Westinghouse Electric Company, and that is a part of that item, to get them properly erected.

Q. There is an item of $192.00 for painting. That

includes what?

A. Well, the lamp fixtures furnished were not satisfactorily painted, and I was afraid the Art Commission would object, so I had them done over.

Q. Now, Mr. Masters, what is the necessity for all these electric signs and the attendant conduits and wiring and so on? Why is that necessary in the operation of this bridge?

A. Well, the plans of the bridge were submitted to the Art Commission without any lighting indicated. The State Art Commission seemed to think there should be lights on it, and that started our trouble, and we put on lamps and fixtures. They designed various ones, and it all wound up in my securing the help of a very able architect to present an artistic appearance to that feature of the structure. That was the only thing they found to criticize, and he put on all of these lights and fixtures, and the Highway Department approved it, and they think it's a good thing to have the bridge lighted and to have all these elaborate direction signs at the ends.

Q. State whether or not that lighting is a measure of protection to traffic over the bridge at night?

A. I think it is. One arc light is better than a half dozen policemen.

Q. Does that in any way tend to minimize the danger of collision at night, either between vehicles or vehicles and pedestrians?

A. It does.

Q. Now, there is an item of $1,275.00 for bronze tablets. Where are those bronze tablets?

A. There is one on either approach to the bridge. They are fastened in the approach railing.

Q. And what is contained upon them?

A. It has a bronze relief of the old bridge and a lot of historic data about the site and location, and, in addition to that, there are the names of the officers of the Clark's Ferry Bridge Company, the name of the contractor that built the bridge my own name and the name of my associate, Mr. Ralph Modjeski, who acted as consultant on various occasions throughout the work, and the name of Mr. Paul Cret, who was the architect that designed the finishing touches.

Q. Are the tablets on either side the same?

A. Yes.

Q. What is included in the item of $210.75 for curb angles?

A. It was necessary to put a protection on the concrete curb beside the toll house, and we put angles on the curb to keep the cars from stopping and turning their rims against the concrete and crushing it down.

Q. And the item of $141.90 for cinder fill at the superintendent's house; what was that?

A. The owners are more familiar with the detail of that item than I, myself. It's an item on their books for hauling cinder to fill around the house.

Q. Now, the total of those items comes to $592,123.41. That does not include any overhead charges at all, does it?

A. Overhead, in what way? You mean, overhead of the bridge company? That's actual cost of construction.

Q. Yes. Now, the next group of items includes

engineering and other allied items, and the first one is design and supervision, $33,560.45. To whom was that paid?

A. I got that.

Q. Paid to you under your contract as constructing engineer?

A. Yes, sir.

Q. Now, the next item is for inspection of materials, $3,611.52. What is the character of that item?

A. That covers testing of the cement, analyses of various materials, the inspection and testing of the steel, making of concrete compression tests throughout construction, sieve analyses of sand and stone, inspection of stone at the quarries, analyses of water and similar items.

Q. Did you have charge of that inspection of materials?

A. It was all done under my direction.

Q. And that item was paid to you?

A. Yes. It was paid through me, all of them.

Q. There is an item of $10.00 for surveys. What does that include, if you recall it?

A. That was paid for some property surveys. I believe the owners know what that item is. It was paid to Mr. Cowden.

Q. It was not paid to you?

A. It was not paid to me, no.

Q. The item of $90.00 for analyses cover what?

A. That's analyses of the water. We had to make analyses from time to time to determine water fit to use in mixing concrete, and that was paid to Dr. George Moffit, down here, at my direction.

Q. The last item of $2,000.00 is an estimated amount due for design and supervision. To whom is that due?

A. That's due me.

Q. And is your estimated balance of the amount remaining due you under your contract as construction engineer?

A. Yes, sir.

Q. Are you familiar with the next three items, Mr. Masters?

A. Partially.

Q. What does the item of $2,550.00 for land purchased include?

A. That money was not paid under my certificate, but the land was purchased at my direction or instance. It was necessary to complete the approaches.

Q. On both sides?

A. On both sides, yes.

Q. And does that figure also include, if you know, the plot of ground upon which the new superintendent's house stands?

A. I think it does.

MR. COBLE:

Do you know?

MR. HULL:

We will put the owner on.

Q. What was the item of $480.00, insurance for?

A. That was fire insurance on the new structure, due to damages that might be incurred by the old bridge catching on fire.

Q. That was carried by the company, paid for by the company, during the period of construction?

A. It should be covered yet. I asked them to carry that insurance.

Q. You mean it was carried at your direction?

A. Yes, sir.

Q. And that is to protect the new bridge structure from the damage which would result to it from fire occurring on the old structure?

A. Yes, sir, I asked them to carry such insurance.

Q. You asked them to carry that until the old structure was completely demolished?

A. Yes, sir.

Q. What is the distance from the old structure to the new structure?

A. I think it's 54 feet, center to center of structure. That leaves about 30 feet, 30 some feet. I don't know the exact figure.

Q. Now, the item of $1,240.72 for pipe, hose and so forth includes what?

A. That includes some miscellaneous items for fire protection to the old bridge during construction. We were operating a lot of dinkies and locomotive cranes, things of that kind, on the new work, and there was great liability of the old bridge being set on fire, and they laid a pipe line over it and bought some fire equipment, and so on, to protect it.

Q. You are not directly acquainted with the next item, cost of financing, are you?

A. No, sir.

Q. You did not handle the financing of the structure?

A. No, sir.

Q. Now, go down to the item, cost of removing

old bridge. You may state what conditions, if any, were imposed upon the bridge company as a condition precedent to the construction of the new bridge by the United States War Department?

A. In order to reconstruct and build a new bridge in this location, it was necessary first to get an act of Congress and then get the permission of the chief of engineers of the United States Army and Secretary of War, and when they gave their consent to the construction of this new structure they insisted that the old bridge must come out of the way. In addition to that, it was necessary to secure the permission of the, I think it's the Department of Forests and Waters now—it was at one time the State Water Supply Commission—which state department has control over the erection of bridges and the placing of any obstructions in the current of the rivers, and they would not give their permission or consent for the construction of the bridge except on the condition that within one year after the new bridge was constructed we would have removed the old bridge and have removed all of the old piers from the river.

Q. And the requirement that not only the superstructure but the piers be removed was a requirement of the War Department, also?

A. Yes, sir. Both of those departments made me report to them. I have had a letter from the War Department to know what progress has been made in the demolishment of the old bridge.

Q. Now, aside from the conditions imposed by the War Department and the State Water Supply Commission, would it have been necessary to remove

these piers as a measure of protection for the new structure?

A. Absolutely. It was a very serious danger of ice gorges there.

Q. Have you estimated the cost of removing these old piers?

A. That statement there is an estimate. There's some 7,650 cubic yards of stone in the piers, and it will cost them at least $3.00 a yard to take it down and place it on the shore some place that will satisfy the Water Supply Commission, which would make an estimate of $22,950.00.

Q. There is deducted from that $1,000.00 as a credit for the sale of the old bridge. Can you tell what that item is?

A. When it came to the point of demolishing the old bridge, the owners asked me if I would get them bidders to remove the old bridge. They thought the old bridge was worth some money. I advertised it extensively in magazines throughout the country, and the best I got was offers to take it down which ranged anywhere from $5,000.00 to $45,000.00 but I couldn't get any offer for the bridge, to pay the bridge company cash money for it.

Q. Those offers that you referred to would have required the Clark's Ferry Bridge Company to pay to the company removing the bridge sums anywheres from $5,000.00 to $45,000.00?

A. Yes. The Clark's Ferry Bridge Company thought I was a pretty poor hand at driving a bargain of that kind, and they made an agreement with some local contractors to take it down and pay them the sum of $1,000.00 for the material, and if they

get it down that $1,000,00 should be taken as a credit on the cost of removing the old bridge.

Q. Has that work been begun?

A. Yes. They are about half through.

Q. It has not been completed?

A. No, sir.

Q. And it has not yet been determined, then, whether that credit of $1,000.00 will or will not be realized?

A. No, sir; it has not.

Q. Now, the next item is an item of cost of finishing, planting, gardening and so forth. Has that been paid or is that an estimate?

A. That work is still in progress and not completed, and that's an estimate.

Q. And it includes what?

A. Grading, planting shrubbery, trees and general improvement around the approaches to make it attractive.

Q. On both sides of the river?

A. On both sides of the river, yes.

Q. The total of the costs to which you have testified and including the costs of financing which you did not testify to comes to $754,751.07?

A. Yes, sir.

Q. Now, Mr. Masters, is there any part of the value of the old bridge structure which remains used and useful to the present bridge property?

A. Yes, sir.

Q. What part of the structure remains and will continue to remain used and useful in the public service?

A. The approaches to the old bridge, the abut-

ments and the retaining walls, which form an exceedingly valuable protection to the new bridge and determined the location of the new bridge.

Q. And, of course, the land and real estate which they own will continue to be used and useful in the operation of the new property?

A. Yes, sir.

Q. Now, did you make an appraisement and valuation of the property of the bridge company as it was in 1923?

A. I did.

(Typewritten folder entitled "Report on Financing, Valuation and Appraisal of Clark's Ferry Bridge for Clark's Ferry Bridge Company" produced and marked "Respondent's Exhibit No. 7, 10-23-25, I. T.").

Q. I show you Respondent's Exhibit No. 7, which is headed "Report on Financing, Valuation and Appraisal of Clark's Ferry Bridge for Clark's Ferry Bridge Company." Is that the appraisal and valuation which you made of the bridge company's property in 1923?

A. It is.

Q. Now, included in this report and appraisal there was a sheet at the end, Mr. Commissioner marked "Reproduction Cost New Estimate, Clark's Ferry Bridge"? Will you state to the Commission how that reproduction cost new estimate was made up?

A. We made a very careful survey of the property, made up a set of drawings, and I believe they are attached, showing the detailed construction of the timber part as well as the masonry work, and

from that we made up an estimate of the quantities involved and applied to those quantities fair average unit prices for work of that kind, and arrived at a total cost new on that basis.

Q. Upon what unit prices did you figure?

A. I used a series of average prices which had been worked up for use of the Interstate Commerce Commission in its valuations on railway structures and covered a period of ten years' time of mean value in prices, excluding the high prices of the war years.

Q. Did you include or exclude the high war prices?

A. They are excluded.

Q. Did the average of the unit prices that you used fairly represent an average for ten years prior to the war?

A. Yes, they are fairly representing an average of ten years prior to the war.

Q. Now, how did you arrive at the depreciation?

A. By actual inspection of the property.

Q. Just elaborate upon that and explain how you set out all of these items of depreciation?

A. Well, I went up and made a very careful inspection and examination of the structure, and after such inspection as I went along I made notes on its physical condition and arrived at the percentage of depreciation in each particular item. For instance, you will find the frame timber work, for which they have been offered this sum of $1,000.00 and which is being salvaged now, is depreciated only 15%, whereas the roof and the siding sheathing, I think, is depreciated 50%. That's all in bad shape.

I guess some of it, since this has been prepared, has been probably renewed, due to bad condition. The floor planking I have the wear and tear—I have depreciated 40%, and so on. Shingles and iron bolts and rods are depreciated about 50%.

Q. In the fill for approaches you allowed no depreciation?

A. No, sir.

Q. And on each item you charged off the percentage of depreciation which your observation indicated had been suffered by that particular item?

A. Yes, sir.

Q. To the depreciated value of the physical structure you made certain percentage additions. What were they?

A. The usual addition of 5% for omissions and contingencies that arise in such construction work, and I have 6% for the engineering, and I have a flat 2% for cost of financing, and then I have added $10,000.00 as my appraisal of the value of the real estate owned by the company.

Q. The total reproduction cost new without depreciation was what?

A. $373,832.66.

Q. And with depreciation was what?

A. $265,112.86.

Q. Now, referring again to Respondent's Exhibit No. 6, state where you obtained the item of value of two abutments, amounting to $14,119.20?

A. That comes from this. That's the second item, two abutments, in my reproduction cost new estimate here, $14,119.20. That's depreciated.

Q. Do we understand then, that the entire value

of the abutments is carried over into the new structure and remains used and useful in the public service?

A. The depreciated value is.

Q. Yes.

A. Yes.

Q. Where did you obtain the item of $7,464.00 for retaining walls?

A. That's in this reproduction cost new as the depreciated value of the retaining walls.

Q. And the $12,000.00 for approach fills?

A. That's the same item in the reproduction cost new.

Q. And the $10,000.00 for land and real estate value?

A. That's my appraisal of the value of the land and real estate. That's not depreciated.

Q. Now, those items are all carried over?

A. Yes, sir.

Q. At the same figures that you have included them in your reproduction cost for 1923?

A. Yes, sir.

Q. Now, in addition thereto, there is included in the value of the old bridge structure carried over as used and useful in the public service an item of $3148.75 for contingencies, $3,967.43 for engineering and $1,401.82 for financing. Can you tell me how those figures were arrived at?

A. That's the prorata share of the cost of those items carried over. The same items are given in the total reproduction cost new, and a certain amount of the reproduction cost is carried over into the new structure, and we have added just the same

proportion of the cost of those items to carry over.

Q. That is, in the reproduction cost new estimate of 1923, you took the total for contingencies, engineering and financing, deducted that from the remainder and set it to one side, you then took the value of the abutments, retaining walls, approach fills and real estate that were carried over and took the value of the remaining items that were not carried over and struck a proportion between those two?

A. Yes, sir.

Q. And then you allocated to the part of the bridge that was carried over such proportion of contingencies, engineering and financing as was represented by the proportion between the physical value of that taken over and the physical value of that not taken over?

A. Yes, sir.

Q. Now, the total of the items of value of the old bridge transferred to the new bridge and remaining used and useful in the public service is $52,101.20; is that correct?

A. That's right.

Q. The remaining items of value, which are not carried over and which are not now used and useful in the public service, amount to what?

A. $213,011.70.

Q. Now, before leaving this, Mr. Masters, will you state just why these abutments continued to be used and useful in the public service?

A. If the abutments of the old bridge had not been there, it would have been necessary to expend a great deal of money in the construction of long

retaining walls and elaborate fills.

Q. For what purpose?

A. For the purpose of providing adequate protection to the new bridge.

Q. Would the cost of constructing those fills and retaining walls have been greater or less than the value here carried over from the old bridge?

A. Oh, far in excess of them.

Q. Far in excess?

A. Yes, sir.

COMMISSIONER STEWART:

Q. Are you speaking of these two abutments, $14,000.00?

A. Abutments, retaining walls—

MR. HULL:

The two abutments, the retaining walls and the approach fills, as I understand.

Q. Those are all, as you conceive it, used and useful now?

A. Yes. They are on the upstream side, Mr. Commissioner, of the new bridge and form an excellent protection against ice floes. It would have been necessary to construct some very elaborate protection had they not been there. That was the point for determining the location of the new bridge. I put it just as close as I could put it to the old bridge.

Q. Well, I am interested. You are giving, then, what is called a reproduction cost?

A. Yes.

Q. Have you any knowledge of actually how much it would cost at present-day prices? Would that be identical with this replacement price?

A. I have some estimates over in my office—I

think it's somewhere in the neighborhood of 63 or 65 thousand dollars—that I made up one time to pay for retaining walls and protection along the shore, but I would have to go back through my files and look up a lot of old figures to get it accurately.

Q. Well, you can do that?

A. Yes, or I can make up new estimates on that now.

COMMISSIONER STEWART:

I think I would like to have that.

MR. HULL:

Mr. Commissioner, did I understand your question was whether or not he had made an estimate of what these things that are there now would cost at present prices? Was not that your question?

COMMISSIONER STEWART:

Yes, what are the prices to-day? Now, I asked him whether that was identical with this replacement price.

MR. HULL:

Q. Well, Mr. Masters, he did not ask you what it would cost to provide other protection but whether you had made an estimate of the present-day cost of what is there?

A. Oh.

COMMISSIONER STEWART:

Q. Abutments and walls and fills?

A. This represents a present-day cost of that structure, depreciated.

MR. HULL:

This is his estimate of the value of what is there now.

THE WITNESS:

It is my estimate of what is there as it stands there to-day.

MR. HULL:

And the thing he said he could compute and which would run about $60,000.00 is what he would have to build had these things not been there. That is correct, is it not, Mr. Masters?

THE WITNESS:

Yes, that is correct.

Q. As I understand it, there's not any very accurate account of the original cost of this old bridge?

A. You will find, Mr. Commissioner, in my report the best data that I could gather on the subject, after a search lasting a great length of time, going through all the State archives and the State legislative records existing on the history of the bridge. I think it makes the original cost somewhere in the neighborhood of $300,000.00. That's the best estimate I could make, after I searched vouchers and studied State archives and similar records.

Q. Well, this is more than that?

A. Yes, the original cost was more than the replacement cost.

Q. That is a rare situation?

A. It is an unusual situation, but it is due to the method, if you will read this, of computing the matter, where the State furnished cement, engineering services, a great many items of that kind, and did all the financing and even let contracts in a very loose manner at that time.

Q. Yes. They were the Golden Days.

A. Those were the Golden Days, when they built

the canal and built it out of the public's pocket. We had no Public Service Commission then.

MR. HULL:

Q. Now, Mr. Masters, there is no part of the wooden bridge structure which remains used and useful in the new bridge?

A. Not of the wooden superstructure; no, sir.

Q. That is all being removed?

A. Yes, sir.

Q. There is no part of the nine masonry piers which will be used and useful to the new structure?

A. No, sir.

Q. The old toll house I believe you said, had been removed and dismantled?

A. Yes, sir.

Q. There is also here an item of approach paving and railing, which appears as being destroyed and no longer used. What was that?

A. That's largely torn up. That was the paving on the approaches to the old bridge, north side.

Q. Now, Mr. Masters, did you make any estimates of the probable cost of constructing a bridge across the river at other points near Clark's Ferry?

A. Yes, sir.

Q. Did you find that there was any other point at which you could construct a bridge across the river cheaper than you could at the site you selected?

A. No, sir.

Q. Is there any other site within five miles north or south of Clark's Ferry at which you could construct a bridge as cheaply as you can construct one across at this point?

A. No, sir.

Q. Will you tell us approximately how much more the next cheapest bridge that could be constructed across this river within five miles north or south would be?

A. Well, if you were to go down-stream near the site of the dam, where the bed rock is much deeper, you could probably come across, with some considerable expense for approach work, for $150,000.00 additional.

Q. Is that the location where you could build the next cheapest bridge?

A. Yes.

Q. And at any other location the cost of construction would be more than $150,000.00 in excess of the cost at this point?

A. It would.

Q. Now, included in Respondent's Exhibit No. 6, is an item of value of location, $100,000.00?

A. Yes, sir. That seems reasonable.

Q. That represents what?

A. That represents the value of the site.

Q. For bridge purposes?

A. For bridge purposes.

Q. Based upon—

A. What it would cost to get another bridge to serve the same purpose, to serve the public in the same way.

COMMISSIONER STEWART:

Q. Where did you get that?

A. That's just—I just made the statement, Mr. Commissioner, that it would cost $150,000.00 to—

Q. Well, that's not the value of the site, the fact

that it would cost more to build a bridge five miles lower down. That's a differential in favor of your location.

A. It's a differential in favor of the location, absolutely.

COMMISSIONER STEWART:

I can't see how you can call it the value of the location.

MR. HULL:

Mr. Commissioner, I don't want Mr. Masters to assume responsibility for using that phraseology. That is not his term. That is the best term that the attorneys could devise for the value represented by the difference between the cost of construction at this point and at the next nearest point.

MR. HULL:

Q. It is a fact, is it not, Mr. Masters, that no bridge could be constructed within a space of 5 miles north or south of this point which would cost at least $100,000, probably $150,000 in excess of the cost of the Clark's Ferry Bridge structure?

A. That is my opinion in the matter, yes.

Q. Now, Mr. Masters, state what made necessary the construction of a new bridge at this point?

A. The old bridge was obsolete, its capacity was such that it could not carry the traffic that was offered to it, and the owners found themselves in the position that being brought before the Public Service Commission by a group of citizens or individuals that I told them they had better build a new structure, that they could declare that a nuisance, it was a big risk to the traveling public, it filled up with traffic on Sundays, causing great delay in getting

over it, on holidays, and even in the week time. Had the thing ever caught on fire there would have been many lives lost. It was a serious public menace and not strong enough for the traffic it was to carry.

Q. From the standpoint of the traffic, when did the bridge begin to become obsolete?

A. Why, I imagine it was some time in 1921 or 22 when it started to become obsolete.

Q. And from that time it rapidly became totally obsolete?

A. It did.

Q. Because it no longer could carry the traffic over it, and could not be made to carry the traffic over it?

A. No, sir.

Q. Could this old structure by any known method of replacement or repair or reconstruction have been made to adequately carry the traffic over it?

A. No, sir.

Q. Now, Mr. Masters, I call your attention to page 10—I believe it is page 10, although this is another copy—it is page 10 of the appraisement and valuation. Did you make a valuation of the old bridge property upon any basis other than reproduction cost new?

A. I made the valuation on the original cost of $300,000, going concern value as of the date of this report, I don't know what it was, $450,000, reproduction new 10 year average $373,832.66, and then the reproduction new depreciated $265,112.86.

Q. Now, Mr. Masters, will you state what records you consulted, and what data you obtained from which you concluded that the original cost was

$300,000?

A. I made a long search and study of the State archives, State legislative records, vouchers of the State Department, and similar information that could be secured from the State.

Q. Did you examine the records of vouchers of actual payments made in the original construction?

A. I did. I also read over acres of very interesting legislative battles.

Q. Some of the materials were supplied by the State, I believe?

A. The State supplied cement and the engineering services, and of course, financed all the supervision work of that kind.

Q. Were you able to ascertain just what the State paid for those things?

A. Only approximately. I had quite a little trouble on the cement item and commissions, took some very old records outside of the State records and got ideas on the cement, and it is the best estimate I could make up without anything said on the records.

Q. Your item of engineering and contingencies, cost of financing, they were charged on a percentage basis?

A. They are usually percentages for items of that kind.

Q. From this data you concluded that the original cost was approximately $300,000?

A. Yes, I think probably the engineering cost was very low because they had legislative fights for a long time, and because they spent a couple hundred thousand dollars before they finally started

construction work on this bridge as to the final location, they had several fights.

Q. I believe they at one time actually started construction at another site?

A. Yes, they were going to build across from Duncannon.

Q. How much was spent on that?

A. I think there was a couple hundred thousand dollars spent before they abandoned that.

Q. Now, Mr. Masters, when was this bridge built?

A. 1828 to 1829 were the construction years.

Q. Will you, Mr. Masters, just give us briefly a history of the bridge structure from that time down to 1915, showing when it became necessary to reconstruct it, and for what reason, and who did the work, and so on?

A. The State of Pennsylvania Canal Commissioners built the original bridge in 1828 to 1829, and immediately after it was opened they rebuilt the wooden construction, because it was too weak. They had a lot of engineers make reports and examinations, and it was not considered satisfactory, and I think another type of construction was adopted. I think they tried that out, they had not built many wooden bridges of this length of span up to that time, they didn't know much about it. They built by practice in those days and not by mathematics, and then it was reconstructed in 1837 to 1838, following a partial destruction by an ice flood.

Q. A partial destruction?

A. Yes, a partial destruction by ice floods.

Q. Do you know the cost of that reconstruction

at that time?

A. Ninety-eight thousand, nine hundred and seventy three dollars and eighty two cents as it shows in the State records. I can give you a lot of that data if you want it. Then it was carried away by a flood, I should judge, partially in March of 1846, and the balance remaining was blown down in May of 1846, and it was reconstructed, and I have no record of the cost at that time. Then it was blown down by a windstorm partially in March, 1859, and about that time the Pennsylvania Canal Commission took it over and a new superstructure was built by the Pennsylvania Canal Commission, and they show there the cost of that superstructure as $24,294.79. That I have from Mr. Thomas Wierman, who I believe furnished me that information. Then there were two spans blown down November 9, 1891, and they were rebuilt. That is as far as I could go from my massive notes.

Q. Now, Mr. Masters, when was the bridge sold to the Pennsylvania Railroad?

A. I have not that data here, I don't have that exact date. I think it was some time in 1859.

THE COMMISSIONER:

Q. The late '50's?

A. '58 or '59.

MR. HULL:

Q. January, 1857?

A. I have it in my records, somewhere, but I don't remember it.

Q. Was the bridge property alone sold, or was all the property of the canal system sold?

A. All the property of the State Canal System

was sold for the sum of $25,000,000, as I remember it.

Q. Now, Mr. Masters, upon what do you estimate the going concern value of this bridge in 1923?

A. Its earning power largely.

Q. Upon its earning power at that time?

A. Yes, sir.

Q. That is, you estimated that it could earn a return upon $150,000?

A. Four hundred and fifty thousand dollars, yes.

Q. The other two valuations you have given are reproduction cost new without and with depreciation?

A. Yes, sir.

Q. Which are all in the tables concerning which we have examined you?

A. Yes, sir.

Q. Now, Mr. Masters, how long have you been engaged in bridge construction work?

A. You embarrass me—20 years.

Q. What are the hazards to which bridge property is exposed that are not common to other public utilities?

A. Acts of God.

Q. Which include what?

A. Floods, windstorms, ice damage, and every thing of that kind.

Q. Is the hazard of ice damage in the Susquehanna river apparently great or small?

A. Why, I have had a pretty broad experience in the rivers across the country, and I don't know of any river that has as much ice, or as great a

flood of ice as the Susquehanna. I consider it one of the worst rivers in the country in the matter of ice.

Q. You are acquainted in a general way with the history of the other bridges over the Susquehanna river?

A. Yes, sir.

Q. Those at Harrisburg?

A. Yes, very familiar with them.

Q. They as well as the Clark's Ferry Bridge at intervals of 20 or 30 years have been taken out by ice?

A. Ice.

Q. And by flood?

A. Floods, fires, and things of that kind.

Q. Referring to frame structures, they have also been destroyed at intervals by fire?

A. Yes, sir.

Q. In view of the peculiar hazards of bridge property, is in your opinion 7 per cent, which is usually accepted as a fair return upon property of other utilities, a fair return upon the property of a bridge company?

THE COMMISSIONER:

I don't think that question is one that ought to be replied to by the witness.

MR. HULL:

Well, it is a matter of opinion, that is true, but the witness is also a man.

THE COMMISSIONER:

I think that is the rule. He is not in position to make any statement that is of any effect in relation to return. He can simply give a guess, and we have

had enough of those.

MR. HULL:

I think that his experience in bridge construction over a period of 20 years dealing with the construction and financing of bridges, I should think that his opinion would be helpful. Of course, it is not conclusive.

THE COMMISSIONER:

I think you might omit it for the time.

MR. HULL:

Q. Mr. Masters, have there been any times during the past 5 or 10 years when the Clark's Ferry Bridge has been put out of commission by reason of floods which did no damage to the bridge itself, but rather cut off the roads leading to it?

A. Nineteen hundred and nineteen I think it was; big ice floods shut them out.

Q. That brought ice up upon the highways, and made the highways leading to the bridge impassable?

A. Yes, sir.

Q. So that no traffic could reach the bridge at all?

A. Could not reach the bridge at all.

Q. For some extended period of time. That is a hazard to which a bridge is also subject?

A. Also subject.

Q. That is a loss of earnings even though no damage to the bridge is done, or to the structure?

A. Yes, sir.

(Discussion with reference to continuation of hearing and time of next hearing off the record.)

THE COMMISSIONER:

It appears to me that you could not get very far on a cross examination on this material without further consideration. If as you intimated you would go on with the cross examination today you would only waste the time of yourselves and the Commission.

MR. ERY:

I believe that the other complainants and myself would be willing to waive cross examination on this evidence that is given by the respondents, if you will see fit to have a valuation of that bridge made by the Commission's engineers, because really a cross examination of this witness does not mean a great deal as far as we are concerned.

THE COMMISSIONER:

The point is that you leave it to the Commission to consider these exhibits?

MR. ERY:

In regard to the valuation of this bridge, I believe that will be agreeable to the other two complainants, because we are not going to get very far on cross examination and dickering around here in regard to the value of that bridge.

THE COMMISSIONER:

All this will be submitted to our Bureau of Engineering.

MR. ERY:

If you will appoint the Bureau of Engineering to make that examination, have that bridge valued up there, we can eliminate all that sort of thing and go right through with the case, because person

ally the complainants do not feel justified in taking the value of the respondent's engineers.

THE COMMISSIONER:

We will then adjourn the hearing until tomorrow morning at 9:30 o'clock.

Hearing adjourned.

Public Service Commission Bldg.,
Harrisburg, Pa.

Saturday, October 24, 1925

Commissioner Stewart, Presiding.

The same appearances were noted.

FRANK M. MASTERS, recalled:

Direct Examination

MR. HULL:

Q. Mr. Masters, you have testified that you were the engineer in charge of the construction of the Clark's Ferry Bridge. In the construction of that bridge will you state whether or not it was your duty to make up the estimates of materials used in the bridge and certify to them before payment was made to the contractor?

A. I made a monthly estimate showing the exact amount of work he had completed every month in strict accordance with the terms of the contract. In addition to this, the funds provided by the sale of the bonds were deposited in certain banks and could be paid out only on my sworn statement that certain amounts were due the contractor. I made such a statement every month.

Q. Now, did that relate only to materials or material and labor?

A. Material and labor, that covered the entire contract agreement.

Q. Then do I understand that with respect to the item of $500,301.29 shown on Respondent's Exhibit No. 6 as having been paid to the Vang Construction Company, that you personally certified the material and labor which had been expended by them, and in return for which they were paid this money?

A. I did.

Q. And you certified also the amount of money that that material and labor represented?

A. Yes, I did.

Q. Now, did you act as purchasing agent of the company in selecting the electric signs, conduits, and other electric equipment as is shown on Respondent's Exhibit No. 6?

A. I personally purchased and handled all of the items included in that amount of $592,123.11 with the exception of the new superintendent's house, and the moving of the house on the north approach.

Q. And the cinder fill?

A. And the cinder fill, the last of it, center fill, they were expenditures made by the officers of the company on my recommendation, but not under my direct supervision.

Q. Now, Mr. Masters, with respect to the items going to make up that total of $592,123.11, which you personally supervised, state whether or not in your opinion the price paid or contracted to be paid for those several items was fair and reasonable?

A They were all fair and reasonable, and were made on the basis of bids taken for the work from various parties.

Q Mr. Masters, has the State Highway Department adopted standard specifications which they follow in the construction of bridges?

A Yes, sir.

Q Are the specifications of the Clark's Ferry Bridge up to the standard of the State Highway Department?

A Yes, I think they are probably a little more modern.

Q And I believe you stated that they had been approved by the State Highway Department?

A Those specifications were all submitted to the State Highway Department and approved by them.

THE COMMISSIONER:

Q What do you mean by a little more modern probably?

A We have developed in the last year some new methods, pouring concrete, such as aggregates of percentages, water, items of that sort, all of which are incorporated in my specifications, they are not all in the Highway Department's specifications, but they are in these specifications.

Q Now, do you have before you a copy of Respondent's Exhibit No. 6?

A I don't believe I have.

Q Here is one, (Handing copy of Respondent's Exhibit No. 6 to the witness) and I call your attention to the third page of it which is headed, "Detailed analysis of operating expenses 1924-25," state whether or not you either made up that analysis or

assisted in making it up?

A. I assisted in making it up.

Q. Who collaborated with you?

A. Main and Company.

Q. Main and Company, accountants?

A. Certified public accountants.

Q. Did Main and Company supply you with the figures expended for these several items for the year 1924 and for 7 months of the year 1925?

A. Yes, I went over those figures with Main and Company from the records that they secured from the books of the Clark's Ferry Bridge Company.

Q. And the estimate contained there for the year 1925, is that yours, or is that Main and Company's?

A. That is a combination of our efforts.

Q. That is you collaborated?

A. I collaborated with them in making that estimate?

Q. In forming a judgment of the proper expenditures in 1925—

A. For 1925, that is right.

Q. Your item of $4,800 for officers' salaries is the same as it was in the year 1924?

A. Yes, sir.

Q. The item for tollkeepers and general labor is $8,000 annually?

A. Yes, sir.

Q. Whereas in 1924 that amounted to $7,412.78?

A. Yes, sir.

Q. What reason is there for a slight increase there?

A. There will be more additional work required in keeping up the bridge, and in the collection of

tolls and auditing the accounts, especially if they are going to make any effort in the future of keeping a record of traffic, and items of that kind, which they have never done in the past.

Q. I believe you testified that the old bridge was a one way bridge?

A. Yes, sir.

Q. And this is a two-way bridge?

A. Yes, sir.

Q. And will necessarily require the services of additional toll takers?

A. Yes, sir.

Q. So that traffic may be speeded up?

A. Yes, sir.

Q. Now, the item of insurance at $2,500, is what kind of insurance?

A. I am not positive of the exact nature of that.

Q. Let me put it this way, is that the insurance to be carried and required under the provisions of the mortgage?

A. That is it, it is required to be carried in the terms of the mortgage.

Q. Federal Income Tax, is that the estimated tax that will be due for the year 1925, or is that the amount due upon 1924 income which was reported March 15, 1925 and to be paid during the year 1925?

A. I think that is the amount to be paid during the year 1925. The auditors will have that detail.

Q. The Federal Capital stock tax is $414, and I notice from this schedule that that amount had already been paid during the 7 months of 1925?

A. Yes, sir.

Q. And will you state therefore whether that

was a tax that fell due in 1925, or was that the tax which fell due in 1926?

A. That I cannot say. You will have to ask the auditors that question, Mr. Hull. I think that that was money expended for taxes, a direct charge against operation.

Q. Do you know for what year the State capital stock tax there is computed?

A. That is the tax that they pay on the increase of the capital stock, that was recently paid.

Q. And that is not an estimated figure for future years?

A. No.

Q. The State loans tax $1,800 is what?

A. I am not familiar with that, but that is money expended.

THE COMMISSIONER:

Is that what you call State corporate loan tax?

MR. HULL:

That is 4 mills on the outstanding bonds.

THE COMMISSIONER:

That is not included in operating expenses?

MR. HULL:

I think it is not included.

(Remarks by the Commissioner with reference to the Pennsylvania Superior Court decision off the record.)

MR. HULL:

Q. Do you know what makes up the items of 2 percent bond tax?

A. I am not familiar with the tax items at all, Mr. Hull.

Q. Now, passing the items of tax, the estimate

of expenses for telephone rental exceeds slightly that of the year 1924?

A. Yes, sir.

Q. That additional $8 is a new installation?

A. Additional calls, on which there are ten cent charges.

Q. Additional what?

A. Additional use of the telephone on account of additional calls, there will be more of the ten cent charges.

THE COMMISSIONER:

Q. Why do you have to use a telephone?

A. On the bridge. That is in the office, the headquarters of the bridge office are in the superintendent's office, that is the bridge company's office as well as the superintendent's house.

Q. Now, the estimate of $2,000 for light includes what?

A. That is the cost that they will have to pay for the current consumed in lighting the bridge, and that is an estimate of mine.

Q. The bridge which they operated in 1924, during which year the charge for lighting was $60.77, that bridge was not lighted anywhere except at the toll house?

A. At the toll house, that is all.

Q. And with the lanterns now installed the bridge will be lighted the whole way across the river? A. Yes, sir.

Q. There is an item of $250 for coal, is that used at the company's office?

A. That is the office and the toll house.

Q. The item of $150 for legal services is an annual retainer, I presume?

A. I think it is.

Q. The item of $500 for postage and printing shows a considerable increase over 1924, but not so great an increase over the 7 months of 1925?

A. They now have a list of stockholders, that they did not have before, preferred stockholders, bond holders and people of that kind that they have to mail statements to, dividend checks too, and things of that kind which increases that.

Q. Your additional allowance is for that purpose?

MR. COBLE:

Can that question properly be asked of this witness?

MR. HULL:

He made up the estimate, he can tell what he took into consideration.

THE COMMISSIONER:

I think ordinarily at least he can tell what he knows. He says he collaborated with Main and Company in making up these operating expenses. What was your point?

MR. COBLE:

He is not in charge of the mailing out of notices or anything else, consequently he does not know.

THE COMMISSIONER:

He made the statement that he collaborated with the accountants in making up this estimate and I do not see any objection to that. Probably he knows as much about it as anybody would know. This increased activity in sending out dividends ought to

be encouraged.

MR. HULL:

He knows that, and we all know that they have these bondholders now.

MR. HULL:

Q. The item of $100 for hose and supplies is considerably less than it was in the year of 1924, what is the occasion for that reduction?

A. Well, it took more miscellaneous supplies to maintain the old bridge than it will the new one.

Q. Because of the character of its construction?

A. Because of the character of its construction, yes.

Q. There is a round figure of $100 put in for miscellaneous expenses, which in 1924 amounted to $92?

A. Yes, sir.

Q. That is substantially the same. There is an item of $125 for donations, do you know what that consists of?

A. No, I don't remember anymore, I had known, but I just don't remember now.

Q. There is an item of $500 for cleaning snow?

THE COMMISSIONER:

Q. Is that an element that will continue to appear in operating expenses, donations?

MR. HULL:

We will have to call another witness with respect to that.

THE WITNESS:

You will have to ask someone, Mr. Commissioner. That may be some highway donation, or something of that kind.

MR. HULL:

Q. The item of $500 for cleaning snow is what?

A. That is an estimate prepared by the owners more than by myself. I think it is going to cost considerably more than that, but I also think they will be able to get some coöperation from the Highway Department in cleaning snow on the bridge and at each side. The amount that they have to do themselves, of course, it depends entirely on the season and the amount of snow you have.

Q. Laying to one side the benefit to traffic from having the snow cleaned, is there any benefit to the bridge structure in having the snow cleaned off?

A. No particular benefit, no.

Q. That is a measure taken for the benefit of the public using the bridge?

A. The traveling public.

Q. Now, the last item of maintenance of $1,800 represents what?

A. That represents what I think will be a fair charge for wear and tear on the floor of the bridge. That is simply an estimate of mine that it will cost us to put in some sort of a floor on the present concrete pavement when it is worn out in about 10 years.

Q. You estimate the life of the present road surface at 10 years?

A. At about 10 years.

Q. And this is the charge which it will be necessary to set aside to take care of that repair when it becomes necessary?

A. When it becomes necessary. A further detail on that, I have designed the floor with 12-inch high

curbs, so that at any future date they can roll in a few inches of asphalt top, and of course, that asphalt top will be good for a few years time, and can be renewed, and will have to be repaired from time to time.

THE COMMISSIONER:

Before we pass from this, are you going to leave this estimate as it is?

MR. HULL:

I was just about to read it.

THE COMMISSIONER:

I was just about to ask to have your witness state what officers there are under that salaries of officers.

MR. HULL:

I think I had better ask the president or treasurer on that question.

THE WITNESS:

I can give a little information on that.

THE COMMISSIONER:

Well, we will pass it then.

MR. HULL:

Q. Now, just a question or two with respect to the highway development up there, Mr. Masters. You have been familiar I take it with the general condition of the highways in that neighborhood from 1915 to date?

A. Yes, sir.

Q. In 1915 were any of the highways leading to the Clark's Ferry Bridge improved?

A. No, sir.

Q. Do you recall what was the condition of the highway on the Harrisburg, or east side of the river, and down the stream from the bridge?

A. Between Dauphin and Clark's Ferry for a long stretch, particularly that along the old canal bed, the highway was almost impassable. It was very narrow, a restricted road along the slope of the railroad, and it had some passing points in it here and there. I used to drive it quite frequently, and it was a very dangerous and very bad highway.

Q. And except for these passing points it was practically a one-way highway?

A. It was a one-way highway for a long distance.

Q. Now, north of the Clark's Ferry Bridge on this side, what was the condition of the highway?

A. It was a very poor road.

Q. And the highways on the opposite side of the river, north and south from the Clark's Ferry Bridge?

A. There was no improved highway. I believe it was sometime after the war that they put in the present concrete highways. There were no improved highways in the early history of the bridge at the other end of the structure. I used to travel the road to Harrisburg up through that country; it was all very rough road some of it very rough and muddy, almost impassable in the spring of the year. I know I got stuck up there one time.

Q. In 1915, state whether or not the bridge structure as it then stood, if it had been in proper repair, would have been adequate to carry the traffic that was offered?

A. Oh, it was more than adequate.

THE COMMISSIONER:

Q. What was that?

A. It was more than adequate in 1915 to carry the traffic that was offered, if it had been in good repair. It was not in good repair.

THE COMMISSIONER:

Well, it is obvious, Mr. Hull, that if you have improved means of communication, eventually any bridge must become obsolescent.

MR. HULL:

That is true. The point we desire to show clearly on this record is that at the time this bridge was acquired by the bridge company, aside from necessary repairs which they promptly began to make, the bridge was adequate to carry the traffic offered, and it was the subsequent developments which made it obsolete and required them to discard this old bridge and construct a new one. Those are the facts we desire to put on the record.

THE COMMISSIONER:

There is no question as to managerial judgment in making a new investment.

MR. HULL:

They did not complain about our old structure, now we have a nice new one with a far better roadway, and they offer these complaints.

(Discussion at the instruction of the Commissioner off the record.)

MR. HULL:

Q. Now, Mr. Masters, do you recall when, or approximately when the highway from Dauphin to Clark's Ferry was improved, or concreted by the State Highway Department?

A I cannot give the exact dates. I think it was sometime after 1917. I believe they were working on it when I returned from the army. no it was 1919 when I returned from the army. I think there was some sort of construction work under way at that time.

Q Nineteen hundred and nineteen?

A Yes, 1919.

Q And at intervals from that time until the present, the road north to Millersburg on this side of the river and the road from the Juniata Bridge to Liverpool on the other side of the river and on up to Sunbury have been improved?

A Yes, sir.

Q Now, what is the present condition of the road from Clark's Ferry south to Wormleysburg on the west side of the river?

A That is a hard surface road, maintained in fair condition by the State Highway Department. It is rather dangerous, and they have been spending a great deal of money on it in the last few years, and improving it a great deal.

Q It is not a concrete highway?

THE COMMISSIONER:

Where is Wormleysburg?

MR. HULL:

Wormleysburg is the little town directly opposite Harrisburg at the west end of these bridges.

MR. HULL:

Q It is not a standard 18 foot highway such as the Highway Department is building on these other highways that I have just referred to?

A No, sir.

Q. Mr. Masters, is there any appreciable difference in distance from the north approach of the Clark's Ferry Bridge down the river to Harrisburg on the west side and the distance across the bridge and down on the east side?

A. Yes, there is quite a difference. It is further on the west side.

Q. What is that difference, if you know, approximately?

A. I think it is approximately 2 miles.

Q. The improvement of the highway from the Juniata Bridge to Duncannon on the west side of the river down to Wormleysburg will have affect upon the traffic across Clark's Ferry Bridge?

A. Oh, if they ever improve that and take out the very dangerous curves and grades along the mountain and the bad condition in Marysville, they will greatly cut the traffic on Clark's Ferry Bridge.

Q. Mr. Masters, state if you know whether within the past year or two a company has been incorporated for the purpose of constructing a bridge across the river at or about Millersburg?

A. There has been.

Q. If such a bridge were constructed state whether or not it would add to or detract from the Clark's Ferry Bridge?

A. It might detract a little bit from the traffic on Clark's Ferry Bridge, not much.

Q. Do you know the condition, the present condition of the highway from Newport through New Bloomfield and Sterretts Gap to Carlisle?

A. I have not been over it in the last few weeks, it is under construction, and it will shortly be a

very fine highway.

Q. It will shortly be?

A. A very fine highway. It may be cleared up by this time.

Q. State whether you know that will appreciably reduce the distance of travel for persons destined to Baltimore and Washington, and coming east over the William Penn Highway?

A. Yes, it will greatly reduce the distance, I don't know the exact number of miles, but it is quite a large reduction, I believe somewhere in the neighborhood of 26 miles. I am not positive of those figures.

Q. Tourists traffic coming from the west over the William Penn Highway and destined to the Gettysburg Battlefield and Baltimore and Washington will find their best road down over that highway?

A. Yes, sir.

Q. Through Carlisle and Gettysburg?

A. Yes, sir.

Q. That traffic now goes where?

A. That comes down to Clark's Ferry Bridge and either goes down the west shore or across the bridge and comes down through Harrisburg.

Q. The completion of the improvement of that highway then will tend to increase or decrease the traffic on the Clark's Ferry Bridge?

A. It will decrease the traffic. You are making me run down my business here.

Q. Mr. Masters, what is the generally accepted rate of depreciation of concrete bridge structures?

A. The Highway Department told me that they

are now applying 2 percent, and they recommend that as a flat rate of depreciation.

Q. According to that they figure the life of a concrete bridge at 50 years?

A. Yes, sir.

Q. As a matter of fact, do you know or have you heard of any bridge that has actually lasted 50 years?

A. I don't think there are any in existence that long.

Q. Do you know of any that have been in existence 20 or 25 years, and to what extent depreciation has been suffered in that period?

A. Yes, quite a number of them that are 25 years old and that suffered greatly from depreciation. We have got some here in Harrisburg, I think the Mulberry Street Viaduct.

Q. Do you recall when that was constructed?

A. I don't. I don't believe it is 25 years old.

THE COMMISSIONER:

Q. How old is the Wissahickon Bridge?

A. The Walnut Lane Bridge?

Q. That is over 25 years old?

A. I don't believe it is over 15 or 17. That is the big bridge there?

Q. Yes.

A. Yes.

MR. HERRING:

The depreciation of the concrete bridge at Mulberry street here is largely due to the fact that it crosses the railroad and the heavy locomotives passing through the arches, and there are quite a number of those arches, and there is very few arches of

the bridge that locomotives and trains do not pass under, and the blast of the exhaust from the locomotives is the largest element in the depreciation of that concrete bridge. I am employed on the railroad and have been working over here long before that bridge was constructed, and during its construction, and as a railroad man I helped in some of the work connected with that bridge, pass under it daily in my work, and I know positively that comparing that viaduct with Clark's Ferry Bridge is no comparison at all, because no locomotives pass under the Clark's Ferry Bridge, and the depreciation of this bridge is principally due to railroad traffic.

MR. HULL:

And no ice comes floating down on the railroad tracks to knock out the piers.

(Remarks by the Commissioner at his instruction off the record.)

THE WITNESS:

If I may, Mr. Commissioner, I would like to support my statement a little bit on the matter of depreciation of a bridge of this type, and perhaps the Clark's Ferry Bridge is a better bridge than anything we have ever done in concrete. We have applied all of the science and knowledge we have today on concrete construction. A structure of that kind is subject to a great deal of damage from ice, and this last year ice came up on the arch rings, so high, and tore them so badly that I had to put a protection on the arch rings upstream to protect them from further damage. It tore large chunks out of the face of the piers we put in this year. If the company had sufficient money I would have liked

to build a stone bridge, but one that had protection on the noses if the earnings would have justified the expenditure, such as I am now recommending for the Market Street Bridge at Harrisburg. You only need to go down and look at the Cumberland Valley Bridge down here, which I believe has been finished since the war, and you will see that that bridge has suffered all kinds of damage from ice and depreciation of one sort or another.

THE COMMISSIONER:

I know that the Hill to Hill Bridge at Bethlehem has had serious bites out of its piers.

THE WITNESS:

And concrete is not such a structure to withstand the ravages of a stream such as the Susquehanna, and you have got to carry an item of some kind in order to take care of the unusual maintenance and repairs that will be necessary to a bridge of that sort. The Highway Department wanted a concrete bridge. I would dearly have loved to have built a series of stone piers with a steel structure on top of the bridge up there, but the Highway Department favored a concrete bridge, they wanted a beautiful structure, and we had to meet the demands of the public in the style of bridges being built to-day.

MR. HULL:

That is all.

THE COMMISSIONER:

Before you leave will you be in a position to give me a sketch of the history of the old corporation?

THE WITNESS:

I have it.

THE COMMISSIONER:

Q. I notice those were rather pencil notes you have there?

A. Yes, they are taken from—oh, I suppose from possibly 100 pages or more of typewritten that my wife made from the legislative records and journals.

Q. Is it in such form that you can present it to the Commission?

A. I can get it in such form to present it to the Commission.

Q. I wish you would.

A. That does not contain anywhères nearly all of the original cost data that I used in the making up of my original cost.

THE COMMISSIONER:

I am not so much impressed by that as the legal relations.

THE WITNESS:

There is a great deal of matter of historical interest and things of that kind in these notes, and I will be very glad to give it to you. I suppose they can be returned.

THE COMMISSIONER:

Yes.

THE WITNESS:

I will be very glad to give it to you.

Cross Examination

MR. COBLE:

Q. In the beginning you said there were about 3,000 people living in the vicinity of Duncannon. How do you arrive at that figure?

A. I arrived at that figure, I believe the popu-

lation of Duncannon is about 2,500, I am not positive.

Q. We can refer to your figure, that is the note I took at the time, you said there were about 3,000 people in the vicinity of Duncannon?

A. It is in my estimate.

Q. Have you any definite radius from the west approach of that bridge within which those 3,000 people live?

A. No.

Q. So that your statement of 3,000 is merely your guess in general of the people that live in the vicinity, and vicinity of course covers a wide area?

A. It is an estimate, and it is very easy to check that up.

Q. Do you believe that the bridge company draws its trade only from that population?

A. Oh, no, the bridge company draws its trade from the State at large.

Q. You supervised the construction of this bridge, did you not?

A. Yes, sir.

Q. Has there been any inspection made by the engineers of the Commonwealth of Pennsylvania?

A. Oh, yes.

Q. They have approved all of the construction work?

A. I don't know exactly what you mean by that. All of the roadway and approach work and parts of that kind are done under the direct supervision of their own engineers.

Q. You say roadway and approach work, how about the piers?

A. The piers and that part of the work was not supervised by them. They approved, however, the specifications in the contract under which the work was done.

Q. Did they ever inspect the piers?

A. I don't know whether they did or not. I know they went all over the work with me, I don't know whether they call that inspection.

Q. Was there any objection made about the present condition of those piers or construction work by them?

A. No, not that I know of.

Q. At the time you purchased the miscellaneous items that were added into the portion of the bridge you obtained bids in the regular way for that material?

A. Yes, sir.

Q. Mailed out bids promiscuously, or invitations promiscuously to people you thought might be interested?

A. Yes, sir.

Q. You made the remark in your testimony that one arc light on the approach to the bridge was better than half a dozen policemen. What do you mean by that?

A. Simply that bridges are favorite grounds for suicides, murders and robberies. That is the history of bridges all over the country. If you want to commit any crime go out on a bridge. The old bridge up there reeks with the history of hangings.

THE COMMISSIONER:

What hangings?

THE WITNESS:

The hangings of people that committed suicide, go hang themselves on the old timber. The history of the old wooden bridge over the Susquehanna river here is full of stuff of that sort.

THE COMMISSIONER:

Q. Was that the original Bridge of Sighs?

A. Not quite that bad. Lights on the bridges are more or less in the nature of policemen.

MR. COBLE:

Q. That is a satisfactory explanation of what you said, but I didn't gather that meaning in your words at the time. Did you also have in mind that the lights at the entrance of the bridge would assist in the speedy handling of traffic?

A. They do.

Q. And because of the fact that the bridge is well lighted you have an opportunity to make what you might call a quick decision as to whether they want to cross the bridge or not?

A. I don't know about that. The direction signs are lighted, and we are trying to find some device that will reflect the light in those signs, so that they can be read. As it is now people are practically obliged to get out of their cars to read the signs.

Q. Do you think those lights at the west end of the bridge which assist in the collection of tolls are sufficient to enable people to see promptly that over this bridge they can go certain directions?

A. I hope they will be after we get the signs adequately lighted.

Q. The traffic that passes that approach, anyone with good eyesight can read those signs now?

A. In the daytime.

Q. And at night?

THE COMMISSIONER:

Mr. Coble, I think we will confine ourselves to our real issue. You have not complained about the bridge administration.

MR. COBLE:

Q. Is there any intention to reproduce the old bridge?

A. What is that?

Q. Is there any intention to reproduce the old bridge?

A. I don't understand the question.

Q. The old wooden structure, do you intend to build it again?

A. No, sir.

Q. But you have carried in your books a figure representing the reproduction cost of that old bridge have you not?

A. No, sir. No, sir, I made an estimate of the value of the old bridge here on a reproduction cost new basis.

Q. You made an estimate of that portion on the cost of financing and replacement of the old bridge, how did you arrive at your estimate?

A. I don't know exactly what figures you are referring to.

MR. HULL:

You refer to the cost of financing?

MR. COBLE:

Yes.

MR. HULL:

We omitted that in examining Mr. Masters, be-

cause he did not handle that, and we are going to take that up with another witness.

MR. COBLE:

Q. You said that you think the value of this location is $100,000?

A. I don't know whether I should put it that way. I think it is probably in excess of that, depending upon what basis you would want to start out with. I said it would cost more than $100,000 to erect another bridge which would serve the same traffic at another location.

Q. The value of the location is carried at $100,000.

A. I think that is the value we carry.

Q. Now, will you explain the reason to us for that, why you value the location at $100,000?

THE COMMISSIONER:

He explained that yesterday from his point of view.

THE WITNESS:

I can explain that from my point of view. I can repeat myself if the Commission wants me to.

MR. COBLE:

Q. Then tell me this, in this the value that you place on the location, is included the strategic value of crossing the river at that point?

A. The strategic value of crossing the river at that point.

Q. Don't there enter into that value any particular peculiarity of the river bed at that point?

A. Absolutely. I just said it will cost from 100 to 150 thousand dollars more money to build a structure that will serve the same purposes as the

present bridge at any other location than exactly where this bridge is built.

Q. Then you are attempting to capitalize on your books the river bed of the Susquehanna River at Clark's Ferry?

A. I am not attempting to capitalize anything. I am not interested in the Clark's Ferry Bridge other than their engineer.

THE COMMISSIONER:

You will have to get in touch with God or John Marshall on that point.

MR. COBLE:

The point I am trying to make is that the bridge can be built very much cheaper than in this place, and they don't own the Susquehanna River.

MR. COBLE:

Q. You stated in your testimony, Mr. Masters, that the bridge during some years could not carry the traffic that was offered to it?

A. Which bridge do you refer to?

Q. The old bridge.

A. The old bridge could not carry adequately or safely the traffic that was offered to it.

Q. Do you think that had there been a more modern structure there during the years that the old bridge was in operation there would have been more traffic over the bridge?

A. Oh, that is delving too far into the problematic, I could not say.

Q. I don't believe so, because you said that the old bridge could not carry the traffic offered to it.

A. The last couple years the old bridge was in operation it was certainly not adequate to carry the

traffic that was offered to this bridge.

Q. Then if there had been a structure there that could have carried the traffic there would have been a great deal more traffic over the river, would there not?

A. I don't know. I could not say.

THE COMMISSIONER:

He could say yes.

THE WITNESS:

You can guess that as good as I can.

MR. COBLE:

Q. You did make the statement that the bridge could not carry the traffic that was offered to it, they are your words. There is a going concern value of $450,000, how is that made up?

A. That is purely an estimate based on the earnings of the last year I think of the life of the old structure, which would be a return after you deducted the operating costs on an investment up to 10 per cent return on an investment of $450,000. I believe that is all set out in my report that you have.

Q. You use a 10 per cent basis in valuing the return to be had on that business there?

A. That would be the money that you would have to cover the interest on your investment and depreciation and similar items of any utility operation.

Q. Is that 10 per cent gross, or is it net?

A. What do you mean gross or net?

Q. Do you base this item $450,000 on a 10 per cent gross return from which would be deductable maintenance and interest, or is that 10 per cent net?

A. I just said that is net. We took the gross

earnings and deducted operating costs, and I think that left $45,000 for 1 year, and that would be 10 per cent on $450,000, which I think I stated would be a fair valuation of the going concern value. I do not think the Commission would allow such a basis, however.

Q. Is there any likelihood that this bridge will be carried away by an ice flood, as far as you know as an engineer?

A. I never gamble with the Lord.

THE COMMISSIONER:

You can say yes to that.

THE WITNESS:

Yes.

MR. COBLE:

Q. You say no accurate record was kept of the classes of vehicles going over the Clark's Ferry Bridge, and for that reason there is an increase in the estimated cost of the operating for 1925, how do you know there was no accurate record kept?

A. I tried to get such records from the bridge company, and they could never supply them to me when I was making my studies of the reconstruction.

Q. Apparently they have been able to get it, because here is a report submitted.

A. I think you will find that that covers last year. I asked for it in 1922, I guess it was, when I started my studies.

Q. You say that the surface, the top surface of the road on the bridge will not have to be replaced for 10 years?

A. I believe not.

Q. Do you know whether or not the bridge company has considered the possibility of this bridge being purchased by the Commonwealth within a 10-year period?

A. I don't know.

Q. You said that the condition of the roads in 1915 was unimproved. Did the building of concrete highways increase the traffic over the bridge in your opinion?

A. Yes, indeed. That is the thing that made it obsolescent.

Q. Now, the road from Clark's Ferry leading along the west side of the river, does that go to any point other than Duncannon?

A. There are several roads up through the mountains there. I believe there is a road up to New Bloomfield that turns off in Duncannon somewhere.

Q. And the macadam, or the same construction as is close to Clark's Ferry Bridge, does that continue down the west shore of the river?

A. Yes, sir.

Q. It goes to Perdix, Cove, Marysville, Enola, and so forth, does it not?

A. Yes, sir.

Q. You stated that the road on the west side of the river is dangerous?

A. Yes, sir.

Q. Will you elaborate on that a bit, and explain to us why you think it is dangerous?

A. Because I tried it, and there in the subway, there at Marysville I was almost run down and run over by a truck. I barely escaped with my own life and the lives of a couple of people.

THE COMMISSIONER:

Q. You mean the right angle turn across the tracks?

A. Not the right angle turn across the tracks, but the one you go under the railroad, through the tunnel, that is dangerous.

MR. COBLE:

Q. That road is dangerous?

A. It certainly is dangerous. It is an imposition on the public.

Q. Will you explain to us how you arrived at your estimate of approximately two miles greater distance down the west side than the east side?

A. As I recall on two different occasions I checked it on my speedometer, they did not come out exactly the same.

Q. There was approximately two miles difference?

A. Yes, the speedometer records are not accurate. You probably could get that from the Highway Department.

THE COMMISSIONER:

That would be due to the curve in the river, it could not help it.

MR. COBLE:

Q. The road from Newport to Carlisle you said will shortly be a very fine highway. Have you any approximate idea how much is concrete, how much is macadam, or what now is apparently ancient construction?

A. No, I do not.

Q. There is not a very considerable portion of it macadam, that road will be replaced, it will mean

that it will be some time before that highway is in general use?

THE COMMISSIONER:

Is it a primary highway?

THE WITNESS:

I believe it is a secondary highway. The Highway Department has been very anxious to put it through, and they told us when they started this bridge that they were going to push that road through as rapidly as possible to take the traffic out of Harrisburg.

MR. JENNINGS:

That is a primary road.

THE WITNESS:

It is marked on the Highway Department map as a primary highway.

MR. COBLE:

Q. The question of concrete bridges has been raised, and you said in answer to a question of Mr. Hull that bridges 25 years old have showed some marked depreciation. In your opinion is that depreciation in the old concrete bridges offset by improved engineering methods in use to-day?

A. We hope so. I don't know.

Q. Do you think it would be in a measure?

A. I certainly hope so. That is the best I can say.

MR. EBY:

Q. Mr. Masters, are you acquainted with the road being constructed from Newport to Amity Hall?

A. Yes, sir, I know that there is such a road under construction, but I am not familiar with it.

Q. All the traffic coming from the west at the present time, not all the traffic, but the majority of the traffic is coming by the way of Millerstown and Liverpool down the west shore of the river, does it not?

A. Yes, sir.

Q. I believe it is the intention of the Highway Department, or I believe that the road construction from Newport to Amity Hall will eliminate about 16 miles, is that right?

A. I don't know. It will shorten the distance.

Q. That is a through road, is it not?

A. It will be a through road.

Q. How far is Amity Hall from the entrance to Clark's Ferry Bridge?

A. I guess in the neighborhood of a mile and a half to two miles.

Q. How far is the road from Amity Hall to Carlisle, or how far is it on the highway that you have just mentioned from Duncannon?

A. I don't know.

Q. Approximately how far? How far away from Duncannon is the main highway that runs from Newport to Carlisle, or from New Bloomfield to Carlisle?

A. I really don't know. I have driven those roads up in there, but I am a little bit confused where the road turns off coming down into Duncannon. I know there is a long hill that you must come down, a couple long hills.

Q. The road through New Bloomfield to Carlisle I believe will be entirely of concrete, is that right?

A. I don't know. I don't know anything about

the Highway Department's plans.

Q. The road leading from that main highway right through New Bloomfield to Carlisle will be macadam to Duncannon, is that right?

A. I don't know the Highway Department's plans.

Q. You have not been over that road lately?

A. Not since this construction started, I have not been up to New Bloomfield for a couple of years.

Q. And then will the new road in process of construction from Newport to Amity Hall carry the greater portion of the traffic coming from the west instead of the road now in existence through Millerstown and Liverpool and then down the west shore of the river, or the other road from Newport to New Bloomfield and then by way of Carlisle?

A. I don't understand the question.

THE COMMISSIONER:

You ought to put one question at a time.

MR. EBY:

Q. Will the road now in process of construction from Newport to Amity Hall, which will eliminate 16 miles, in your mind carry the greater portion of traffic coming from the west, or a greater portion of traffic—

A. I think you want to ask me if there will be more traffic over the William Penn Highway to Baltimore and Washington coming over the short road through Newport and Carlisle or will more of it come down through Amity Hall and across the bridge and into Harrisburg?

Q. That is it exactly.

A. Or the other road from Millerstown to Liver-

pool? Nobody would drive up to Liverpool and down again to Amity Hall. They will come by the short route.

Q. That road would be obsolete as far as southern traffic is concerned?

A. Anybody that wants to go over the William Penn Highway to Baltimore and Washington and Gettysburg will not want to come down and pay toll over the Clark's Ferry Bridge, come to Harrisburg and pay toll there again when they can go over a route 26 miles shorter and reach their destination travelling over a beautiful highway over a scenic route to points in the south. They will all go that way, I should judge.

Q. How far is it from Newport to Baltimore?

THE COMMISSIONER:

I don't think that is material.

MR. COBLE:

There is considerable travel that way.

THE COMMISSIONER:

In the first place this witness does not know anything of the plans of the Highway Department, and he has already specifically testified that any road construction or road improvement would probably affect this particular bridge company. I think we have had enough testimony on that.

MR. COBLE:

Q. Mr. Masters, in your business is there such a contract known as a cost plus contract?

A. Yes, sir.

Q. What is a cost plus contract?

A. That is a very difficult question for me to answer.

Q. Just in a few words?

A. It is a matter of keeping the cost of the job and adding some percentage on that, and paying for the work on that basis.

Q. Does that include profit or percentage for the contractor?

A. That is his profit.

Q. Were there competitive bids on the Clark's Ferry Bridge? Were there competitive bidders?

A. I think I had 8 or 9 bids on it.

Q. It subsequently went to the Vang Construction Company of Cumberland, Maryland.

A. Yes, sir.

Q. And the given price was some $501,000?

A. Yes, on the original plans.

Q. What kind of contract did they have, was that a cost plus contract?

A. A unit cost contract.

Q. It was not a cost plus contract?

A. It was not.

MR. HULL:

If we want to get through here this morning it seems to me that we will have to stop repeating things that are already in the record.

MR. EBY:

These questions are absolutely necessary.

THE COMMISSIONER:

Mr. Eby, there are already in the record the contract and everything you have asked has been testified to.

MR. EBY:

I asked Mr. Masters what a cost plus contract was, to tell us what it was.

THE COMMISSIONER:

But that is immaterial in this proceeding.

MR. EBY:

Q. If you should contract to build or engineer a certain piece of work, and due to some unforeseen reason on your part it would show a deficit or loss in the work contracted for, you would be perfectly responsible for it, it would be your fault, wouldn't it?

THE COMMISSIONER:

Repeat that.

MR. EBY:

For some unforeseen reason.

THE COMMISSIONER:

What was that question?

MR. EBY:

I asked Mr. Masters if he were contracting to build a certain building or piece of work, and for some unforeseen reason he would show a deficit on his work, a loss, I am asking him whether that would be his fault.

THE COMMISSIONER:

It would be his misfortune.

MR. EBY:

Would it be his fault?

THE COMMISSIONER:

I don't see that that makes any difference. Yesterday you agreed that as far as cross examination on this was concerned you would leave that to the Commission's investigation, to its Bureau of Engineers. Now, don't introduce material that really does not appear in these specific plans.

MR. EBY:

What I am trying to find out, Mr. Commissioner—

THE COMMISSIONER:

The contract is in evidence, the evidence is here, and there is no necessity for repeating it.

MR. EBY:

We are asking Mr. Masters as a business man why the Clark's Ferry Bridge Company should take that loss on their shoulders, add that to their cost, when at the same time the Vang Construction Company have crossed it off their books, we are asking Mr. Masters if in his opinion he would do that?

THE WITNESS:

I don't think my opinion as a business man would carry any weight at all. This valuation is wholly on a reproduction cost new basis, and the Commission will decide whether or not that item should be allowed. It is the value of this structure, or what you could produce that structure for to-day.

MR. EBY:

Q. I am asking you whether you as a good business man would take that loss?

A. I don't believe, Mr. Commissioner, that I should give my opinion on matters of that kind.

THE COMMISSIONER:

I know a bridge contractor within the last six months lost over $160,000.

MR. EBY:

The bridge did not take the loss, however, Mr. Commissioner.

THE COMMISSIONER:

I cannot give you the details on this, but it is a misfortune in the life of a contractor.

THE WITNESS:

I don't mind giving you this for your information, that the contract that we had with the Vang Construction Company, he was a very good gambler, and he thought he could beat the river, and he took his chances, he took that contract for almost $100,000 lower than the next lowest bidder, and as much as 150 to 200 thousand dollars lower than the other bidders. When I presented the matter to him he said, "I am willing to go there on the job, and I believe I can beat the river." Other people would come and go up and look at the structure and say it was worth a good deal more money than was paid for it, and it could not be done again for that amount.

MR. COBLE:

We object to that.

THE COMMISSIONER:

It need not go into the record.

MR. HULL:

I think that what Mr. Masters said with respect to the other bids offered is perfectly competent on the record.

MR. COBLE:

If we have less interruptions from Mr. Hull we will be making more speed here. There has been an objection made, and if we are going slow we want to speed it up—

THE COMMISSIONER:

I will speed it up. Now don't talk so much. You are occupying the time now.

MR. HERRING:

Q. Is this one item of removing 9 piers, 7,650 cubic yards at $3 a cubic yard or $23,950, is that a

total loss to the bridge company, or is any of that material that is salvaged usable again in other construction work?

A. No, those are the old piers standing in the river, and the Water Supply Commission has ordered them to be taken out down to low water mark, and they must get that stuff out of the river.

Q. When they remove them are they a total loss, or is there any salvage in them for other construction work?

A. I have not the slightest idea, it possibly could be utilized for some purposes, but it is going to cost a great deal of money to get it away.

Q. The thing is that the stone, most of it, could be used to a certain extent?

A. No, that is not quite a fact.

Q. You stated in your testimony here that these new highways that are under construction or contemplated, particularly the one on the west shore from Duncannon, or what we would say opposite Harrisburg, you said that was approximately 2 miles longer than traveling down this side. If that highway was improved to a modern highway, the same as it is on this side of the river, it would deflect more or less traffic from the Clark's Ferry Bridge. Now, in view of the fact that it is two miles farther to Harrisburg by the west shore than by the east shore, do you think that it would deflect any considerable amount of traffic from the Clark's Ferry Bridge?

A. I don't know. I think it probably would, yes. Those people would probably go down on the other side if it was as good a highway as on this side, and

I believe that a great many people would come down on the other side rather than come down through the dense traffic conditions here in the city. Certainly I believe that truck business, traffic of that kind would go down on the other side.

THE COMMISSIONER:

Mr. Masters means that would be a bypass as far as Harrisburg is concerned, and one of the things that everybody is interested in securing.

MR. EBY:

Q. The road from Dauphin to the entrance of the Clark's Ferry Bridge had been improved how long before the construction was started on the Clark's Ferry Bridge?

A. I am not familiar with those things.

Q. What I am trying to get at is that the roads on both sides of the river leading up to the entrance had been improved roads prior to the time of the construction of the new bridge, is that right?

A. Oh, yes.

Q. How long approximately before?

A. I don't know, a couple of years.

Q. Those roads were improved about two years before the construction had been started on this Clark's Ferry Bridge?

A. The roads were improved at the time.

Q. About two years before?

A. That just depends. The roads right near the bridge were, but the road from Sunbury was opened only last year.

Q. The bridge company ~~had~~ made no improvement of their bridge until two years after the road

had been laid on both sides of the river, is that right?

A. I guess that is about right.

(Remarks by the Commissioner at his request off the record.)

CHRISTIAN W. LYNCH, a witness called in behalf of the Respondent, being duly sworn was examined and testified as follows on

Direct Examination

MR. HULL:

Q. Mr. Lynch, where do you reside?

A. Harrisburg.

Q. What is your business?

A. At the present time I am president of the Harrisburg Pipe and Pipe Bending Company.

Q. Are you connected with the Clark's Ferry Bridge Company?

A. Yes, sir.

Q. In what capacity?

A. Vice-President.

Q. How long have you been connected with this company?

A. Since its organization.

Q. In what year?

A. I think it was 1915.

Q. Mr. Lynch, it appears from the records of the Public Service Commission in Application Docket No. 157, 1915, that on April 7, 1915, at 1521 Chestnut Street, Philadelphia, the property of the Pennsylvania Canal Company consisting of two parcels, one being the Clark's Ferry Bridge property, and another parcel, the canal land was sold at judicial

sale to one Christian W. Lynch, are you the Christian W. Lynch referred to?

A. Yes, sir.

Q. It further appears that the purchase price paid for parcel F, as described in the proceeding, and consisting of the bridge was $4,500, is that correct?

A. Yes, sir.

Q. Was that the amount you paid for that parcel?

A. If my recollection serves me well, that is what was paid.

Q. It also appears from that record that parcel G was sold for $1,100, were you the purchaser of that parcel?

A. Yes, sir.

Q. Was that the purchase price?

A. Yes, sir.

Q. Referring to that second parcel, who owns that now?

A. My impression is that it was subsequently sold to the bridge company. I am not certain about certain lines, where they were.

Q. Do you still retain individually any of that land that you purchased up there?

A. Yes, I cannot describe the lines, I don't know just where the lines are.

Q. Did you make this purchase for yourself alone or on behalf of others?

A. I made this purchase for Mr. William Jennings, Mr. Duncan, Mr. William Wills and myself, I happened to be the buyer at the sale.

Q. Subsequently the bridge property and some

land on either side was sold to the Clark's Ferry Bridge Company?

A. Yes, sir.

Q. Who were the incorporators of your company?

A. William Jennings, P. F. Duncan, William Wills and myself, as far as I recall. I don't think there was anybody else.

Q. The sale at which that property was purchased was a public sale?

A. Oh, yes, sold at the auction rooms of Freeman and Company, it was at Philadelphia.

Q. Had been widely advertised over the State?

A. Yes, sir.

Q. What was the condition of the bridge at the time you purchased it?

A. Well, it was in very poor condition.

Q. Bad repair?

A. Very bad repair.

Q. Dangerous?

A. Well, that I cannot say, it was evidently dangerous for the kind of travel at that time, and we thought it sufficiently so to begin making repairs after the company was incorporated.

Q. You subsequently sold that to the Clark's Ferry Bridge Company, for what consideration?

A. I think it was $3,000 cash, a small amount of cash, and $20,000 worth of bonds that were issued by the company, and I think $22,000 worth of stock. I think those are the figures, I am not positively certain, because I have not looked at it for a long time.

Q. It appears from examination of the books by

the accountants, the report of which someone will later put in evidence here, that under date of September 30, 1915, you transferred the bridge property to the bridge company upon the payment of $3,000 cash, $20,000 first mortgage bonds, and $22,000 of common stock?

A. That is my recollection, and I assume the record is correct.

Q. Mr. Lynch, are you familiar with the values of real estate in the vicinity of Clark's Ferry Bridge?

A. Only know about some properties that have been sold recently. I do not live in that neighborhood, I am not particularly conversant with it.

Q. You have been a property owner there however—

A. Yes, since 1915.

Q. And you know of purchases of property which Ray Steward has made in that vicinity?

A. Yes, sir.

Q. Do you know the properties that have been offered to him and the price for property in that vicinity?

A. From what has been told me, yes.

Q. In the estimate of valuation of the property of the bridge company the real estate on either side which was originally owned by the bridge, including a piece on the east or south side extending from the old bridge north about 450 feet and a piece somewhat larger on the northern side, is included in this valuation at a figure of $10,000, state whether or not in your opinion that is a fair and reasonable estimate of the value of that property?

A. I would say it is.

Q. Now, you purchased a small piece of property from the Pennsylvania on the east or south side prior to the construction of the new bridge, did you not?

A. The bridge company did.

Q. I mean the bridge company?

A. Yes, sir.

Q. Did you find the Pennsylvania Railroad ready and willing to relinquish title to or dispose of the property there?

A. Well, I did not participate in that with the railroad company, I just know what the conditions were as they were progressing, I did not deal with them directly. I knew the conditions but I did not come in contact with them.

Cross Examination

MR. EBY:

Q. You were one of the original incorporators of the Clark's Ferry Bridge Company?

A. Yes, sir.

Q. You sold the bridge to the company for $45,000?

A. I sold the bridge to the company for a consideration showing a par value of $45,000.

Q. You paid $4,500 for the bridge?

A. Yes, sir.

Q. What percentage of profit did you make on that transaction?

A. I don't know—

MR. HULL:

Objected to.

THE COMMISSIONER:

The objection is sustained. That has nothing to do with it.

MR. EBY:

Q. Mr. Lynch, you received $20,000 in bonds as part payment for the bridge?

A. Yes, sir.

Q. Did you sell any of those bonds?

A. No, I exchanged those bonds later on for some other securities of the bridge.

Q. Of the bridge?

A. Yes, sir, later on, some years later on.

Q. Did you make on June 15, 1915, an affidavit before M. H. Miller, a notary public, that the receipts from the operation for the year 1914 were $4,779.67, and that the expenses for operating said bridge are estimated to be from $1,000 to $1,200 a year?

A. I don't recall. I assume if you have a record of it I did, but I don't recall. I probably did.

Q. It is perfectly true then that the cost of operation of the Clark's Ferry Bridge was equal to the interest on the $20,000 in bonds given you as part payment?

A. I don't recall those figures at all, sir.

Q. You engineered the financing of the Clark's Ferry Bridge?

A. Together with my associates, yes.

WM. JENNINGS, a witness called in behalf of the Respondent being duly sworn was examined and testified as follows on

Direct Examination

MR. HULL:

Q. Mr. Jennings, where do you reside?

A. Harrisburg, Pennsylvania.

Q. What is your business?

A. Banker.

Q. Connected with what institution?

A. Commonwealth Trust Company.

Q. In what capacity?

A. President.

Q. Are you connected with the Clark's Ferry Bridge Company?

A. President of the Clark's Ferry Bridge Company.

Q. Have been so for how long?

A. Since its inception.

Q. You are the William Jennings referred to by Mr. Lynch as being one of the purchasers of the Clark's Ferry Bridge Company property at judicial sale in 1915?

A. I am.

Q. You are one of the incorporators of that company?

A. I am.

Q. That was originally incorporated with how much capital stock, if you recall?

A. $25,000 capital stock.

Q. And bonds of how much?

A. $20,000.

Q. Between 1915 and 1923, what increases, if

any, were made in the outstanding indebtedness of the company?

A. An increase made in the bond issue.

Q. Of how much?

A. $30,000.

Q. So that there was outstanding in 1923, $50,000 worth of bonds?

A. There was.

Q. Was there any increase made in the capital stock?

A. Not up to that time.

Q. At or about 1923, was there an increase made?

A. At the end of 1923, the capital stock was increased from $25,000 to $225,000 of common, and an authorized issue of $175,000 of 7 per cent preferred.

Q. The issue of $225,000 of additional common stock at that time was occasioned by what?

A. By the valuation of the bridge.

Q. Made by whom?

A. Made by Mr. Masters. Well, if I might say so, immediately after we bought that bridge I was right intimate with Mr. James H. Fuertes who was the engineer in charge of the Mulberry Street Viaduct, and I asked him his replacement value of a bridge of that kind. That was in 1915, and he then put it at $200 a lineal foot, and the bridge being 2,080 feet long at $200 a lineal foot, we had there a very considerable value.

Q. Subsequently you had a valuation made by Mr. Masters?

A. By Mr. Masters.

Q. And it was upon the basis of that valuation

that you increased at that time the value on your books of the old bridge property and issued $225,000 additional common stock?

A. We did.

Q. The balance in earnings being carried into your surplus?

A. Yes, sir.

Q. Were you personally in charge of the financing of the new bridge project?

A. I was.

Q. State what effort you made to dispose of the bonds of the new issue before you were finally successful?

A. I tried to make deals, and I might say to ease my own conscience that I never asked anyone to bid for those bonds, but I did have through the representatives of a number of bond houses who did business in Harrisburg a request from them to submit to their houses Mr. Masters' figures of estimates of the bridge, and out of at least 8 houses, we only had 2 that would talk to us. McGowan and Company of Philadelphia insisted that the Commonwealth Trust Company should buy at least $100,000 worth of those bonds, that P. F. Duncan and his bank in Duncannon should buy $25,000 worth, and Mr. Lynch should buy a fair amount for himself, so they were eliminated on that proposition, because had we accepted, we might just as well have accepted the entire issue. There was really only one bidder for this bond issue, and that was Parsly Brothers and Company.

Q. You said others would not talk to you?

A. I mean that the others would not talk to us,

they said it was too hazardous a proposition. Brown Brothers said that they would not touch the property, and another house said it was not a bond proposition, it was a stock proposition. That was the way the various answers came back. The history of the company was such that as a banker, I say frankly, the Commonwealth Trust Company did not bid, and had nothing to do with it. I would not want them because the history of the company was such that it did not stand investigation of what I would term a conservative banking house. In other words, it was built on prospects, and sold on prospects.

Q. Mr. Jennings, has the common stock or the preferred stock of this company ever been sold generally, or placed before the public so that a market value of it has been established by public sale?

A. The preferred stock was sold mostly in the neighborhood of Duncannon, and as president I have not been asked, as I recall, to sign more than one or two certificates for the making of transfers of that stock since it was issued. As to the common stock I still think it is all, so far as I know, in the hands of the four original holders.

Q. Of course, it is not listed on any stock exchange?

A. No.

Q. Mr. Jennings, did you personally have charge of the purchase of the additional real estate necessary in connection with the construction of the new bridge?

A. I had particular charge of the purchase of the real estate on the east or south side of the river from the Pennsylvania Railroad Company.

(Letter from M. C. Kennedy, Vice-President of the Pennsylvania Railroad System in charge of real estate, addressed to Wm. Jennings, produced and marked Respondent's Exhibit No 8, E. E. M., 10-24-25.)

MR. HULL:

Q. I show you Respondent's Exhibit No. 8 which purports to be a letter from M. C. Kennedy, Vice-President of the Pennsylvania Railroad System in charge of real estate, addressed to Wm. Jennings, and ask you whether or not you received that letter?

A. I did.

Q. That refers to the purchase of the piece of property from the Pennsylvania Railroad by the Clark's Ferry Bridge Company consisting of 19,500 square feet, was that purchase made?

A. It was.

Q. What did you pay for it?

A. Three hundred and sixty-five dollars I think it was. The treasurer's report will show the exact amount.

MR. HULL:

Mr. Commissioner, this is the only copy of this blue print, and with the permission of the Commission we will mark the boundaries of the real estate more plainly upon the large exhibit offered, so that the boundaries will be shown there.

THE COMMISSIONER:

Very well.

MR. HULL:

We will not offer this.

Q. From that letter, Mr. Jennings, does it appear that the Pennsylvania Railroad was anxious

or reluctant to sell the real estate on this side of the river?

A. The history of that experience was that I tried through the ordinary channels to get something out of the Pennsylvania Railroad Company that would permit us to obtain sufficient ground on the east or south side of the river to put up the new bridge, and it was only after I was compelled to go to what I would term the "higher up" that we were able to get any action whatever. The original proposition was that they would give us enough ground below our bridge provided we gave to them all the ground we had on the upper or east side of the bridge, and it was only after very great difficulty that we could get anything out of them, their idea being to retain possession of that river front in order to control the landing of coal and the reason they cut it down so was that we would not have any place on the property anywhere where a boat could land to unload coal.

THE COMMISSIONER:

Q. You mean the plan was to prevent the river shore being used for unloading coal?

A. Yes. I thought I had made that clear.

MR. HULL:

Q. That is to prevent it being unloaded on property not owned by the Pennsylvania Railroad?

A. To prevent its being unloaded out of their control.

THE COMMISSIONER:

Q. Entirely to restrict the trade in coal?

A. I don't know their attitude at all, Mr. Commissioner, on that.

Q. Anyway that was the effect, that it prevented coal being unloaded at that time?

A. That is my understanding, my interpretation of their suggestions.

MR. HULL:

Q. And the piece that was sold to you there is only 50 feet on the river, although it is much wider?

A. What they did sell us was the least amount of ground that we could get by with. They did not sell us that until I intimated to someone that we would probably condemn that property if they did not come across. It took a very considerable length of time to get it through.

Q. Mr. Jennings, did you purchase any property on the north or west side?

A. We did.

Q. Can you describe that property by telling us upon what it fronts, and about how much it was?

A. The bridge company bought on the far side of the highway coming down there around the curve toward the Juniata River bridge about 100 feet front and from 2 to 3 hundred feet deep, for which we paid $2,000. That property is used, part of it, as ground for the superintendent's house and office, and the rest was given in exchange to Mr. Ray Steward, so that he would have property to place a building that was on the opposite side of the road, and which in order to have a better approach to the bridge it was necessary to move, so that in fact we bought that land and gave part of it in exchange for land on the river side of the road.

Q. The purchase price for that ground was $2,000?

A. Two thousand dollars.

Q. Now, are you acquainted with the sale and asking price of real estate in that neighborhood?

A. I know of several.

Q. State whether or not in your opinion the price of $2,000 was a fair and reasonable price for that piece of real estate at the time it was sold in 1924?

A. It was, I would say, a very reasonable price. It was very attractive for cottages during the summer, it is a thickly populated place up there, it is picturesquely located, it is between the confluence of the Juniata and the Susquehanna, and on account of bathing and boating facilities is very desirable.

Q. Now, Mr. Jennings, did you have charge of the deals leading up to the contract for the removal of the old frame bridge structure?

A. I didn't have personal charge of it, Mr. P. F. Duncan did that. I know the contract price, and have been fussing with the contractor and Mr. Duncan ever since about it.

Q. And what was the final contract price?

A. They were to pay us $1,000, $500 down and the balance in November, by which time they were to have the entire bridge removed from off the piers.

Q. In the end that contractor was to get the material?

A. The party paid $1,000.

Q. Was the party with whom you made the contract able to furnish a bond to insure completion of that contract?

A. He was not.

Q. Did you receive any other bids for the wrecking of the old structure?

A. We had quite an elaborate list of bids which were submitted to me by Mr. Masters, the lowest of which was that we pay them $5,000 and they take the material.

Q. The bid that you finally accepted was the best bid by $6,000?

A. The best bidder we could get, and I think he will lose money on it.

Q. I believe you have charge of the sale of the securities of the new bridge, that is the issue of bonds and preferred stock?

A. I did the negotiating.

Q. I show you Respondent's Exhibit No. 6 and call your attention to the item of cost of financing; discount on the sale of the bonds, $58,500, is that the amount of discount actually allowed by you to Parsly Brothers and their associates?

A. It is.

Q. I call your attention also to the next item, the discount on the sale of preferred stock, $10,843. State whether or not that was the actual amount of discount and commission paid by reason of the sale of the preferred stock?

A. It is.

Q. The items, professional services, $2,994.20 and an item of expense on the bond issue of $2,185.66 including the costs of writing and printing the mortgage, recording it, legal fees in connection with the printing and lithographing the bonds, that is correct?

A. It is.

Q. Mr. Jennings, it has been testified by Mr.

Parsly in this case that some unusual inducements were offered to them in the matter of price before they would purchase these bonds. State whether or not it was necessary for you to agree to any unusual terms in your mortgage in order to induce them to take them?

A. It was, because he was the only real bona fide bidder for the proposition, and we had to submit to some unusual terms in the mortgage.

Q. Will you state what unusual terms were imposed upon you in issuing this mortgage?

A. As near as I can recall we were limited in the dividend on the stock. We had to pay over 75 percent of all the monies we might have left over after we met the sinking fund and interest charges, it runs for 15 years.

THE COMMISSIONER:

Q. How long?

A. Fifteen years, the sinking fund started December 1, 1925. In case a complete highway was built on the west shore of the river and the proceeds were diminished we had to forego all of our earnings over and above interest and sinking fund charges, and the interest on the preferred stock should they so demand.

MR. HULL:

Q. The sinking fund charge, of course, was a fixed amount?

A. It is a fixed amount in the mortgage.

Q. And the interest is a fixed amount?

A. Is a fixed amount.

Q. And the additional amounts which they require you to refrain from distributing were to be

put into a repurchasing of the bonds?

A. A repurchasing.

Q. That is for the protection of the bondholders?

A. It is.

Q. Was there any limit placed on the salaries of officers?

A. The limit of salary for the officers was $5,000 a year for the four officers.

Q. The mortgage provided also in detail the kind of insurance which you were required to carry?

A. The mortgage required us to carry several specified kinds of insurance, in addition to any other reasonable forms of insurance that the trustee may require.

Q. Public liability?

A. Yes, sir.

Cross Examination

MR. HERRING:

Q. Do you get a salary as president of the bridge company?

A. One thousand and two hundred dollars a year.

Q. This $10,000 discount on the sale of the preferred stock and the commissions of $843 on the preferred stock, do you know who received the principal part of these commissions and discount?

A. I do.

Q. Who got any part of it?

A. The holders of the original $50,000 of the first mortgage bonds.

Q. Who were they?

A. Well—I can tell you all of them, Messrs. Lynch, Wills, Duncan and Jennings.

Q. They received that?

A. They received that. They had first mortgage 6 percent bonds which they had to exchange in order that the present mortgage bonds would precede them in the lien on the property, and there was issued $175,000 of preferred stock in order to finance this operation, they thereby changed their security from a first lien to a preferred stock lien.

Q. Mr. Jennings, you stated when bids were offered for the purchase of these bonds, that one of the propositions offered to you was that the Commonwealth Trust Company take $100,000 worth of bonds, the Duncannon Bank $25,000 I believe, and you said Mr. Lynch a portion of them. Why did those three parties that were required under that proposition to take some portion of those bonds, what was their particular objection to doing that?

A. It was not a clean sale. We had additional money to raise, and did not propose to burden ourselves with any unnecessary demands. When you sell an issue of bonds you either sell them all or you don't sell them, and that was a general sale.

Q. The reason I asked you that question, you indicated that the buyers of the bonds, probably you didn't say so, but that the bridge proposition itself was speculative?

A. I said the first proposition had no history.

Q. In the discussion of the question of the purchase of the real estate from the Pennsylvania Railroad Company and the difficulty you had to secure this real estate from the railroad company, are you familiar with any part of the working of the real estate department of the railroad company?

A. That was my first experience for a number of years.

Q. Do you know that it has always been the policy of the Pennsylvania Railroad that once it secures control of a particular property the question of selling it rarely ever enters into their business?

A. I am not in the Pennsylvania Railroad, and I cannot answer.

Q. I am telling you, and that their principal purpose in buying property is not for the purpose of selling it at a profit, but to keep it in case of necessity for their own use. I think that, Mr. Commissioner was one of the reasons why he had difficulty to secure the property from the Pennsylvania Railroad.

THE COMMISSIONER:

That is sufficient. I suppose we will assume that there is some policy there that will justify their position.

MR. HULL:

We object to testifying from the counsel table.

(Remarks by the Commissioner at his instruction off the record.)

MR. HERRING:

One more question and then as far as we are concerned Mr. Jennings is done. You stated that one of the provisions of the bond purchase, and the financing of the bridge, one of the conditions arising there and called to your attention, was the fact that if an improved highway was put on the west shore of the river a larger proportion of your income would have to be applied to the retirement of the bonds?

A. If they so requested.

Q. Mr. Jennings, were you not some sort of an official in the William Penn Highway Association?

A. I have been its first and only president, and since—

THE COMMISSIONER:

That is a decorative position?

THE WITNESS:

Yes, it is, and they have not had a meeting for 4 or 5 years, and since they have stopped paying their dollar, I have gotten tired paying their bills, and as far as I am concerned it is dead.

MR. HERRING:

Q. Did you have any part in regulating any portion of this highway or making any suggestions?

MR. HULL:

That is objected to as not being cross examination.

THE COMMISSIONER:

That is immaterial.

MR. HERRING:

All right, then we are done.

P. F. DUNCAN, a witness called in behalf of the respondent being duly sworn was examined and testified as follows on

Direct Examination

MR. HULL:

Q. Mr. Duncan, you reside where?

A. Duncannon.

Q. And have resided there for how long?

A. Well, 42 years, all my life on Duncan's Island.

Q. What is your occupation?

A. Banker.

Q. Connected with what institution?

A. The Duncannon National Bank.

Q. In what capacity?

A. Cashier.

Q. Are you connected with the Clark's Ferry Bridge Company?

A. I am as treasurer.

Q. Are you the Mr. Duncan who has been referred to as one of the four men who originally purchased the Clark's Ferry Bridge property?

A. I am.

Q. At the time that property was purchased, Mr. Duncan, what was its condition?

A. Very bad.

Q. Out of repair?

A. Out of repair, leaky roof, bad floors, generally bad condition.

Q. Now, what was done by the company after it acquired that property to put the property in repair?

A. Put on a new roof, or most of it, new floors, new floor timbers, and rebuilt two new spans.

Q. Now, that was during a period of 4 or 5 years following your purchase?

A. Yes, sir.

Q. Where are the books of this company kept?

A. At Duncannon by me.

Q. Under your supervision?

A. Under my supervision.

Q. And you have knowledge then of the amounts which were spent from time to time for these purposes?

A. I have.

Q. Now, it appears from a report of the auditors, which will be put in evidence in this case, that in the year, 1917 there was paid on a contract for two spans the sum of $10,000, and in addition thereto for labor and material $746.87, with whom was that contract made?

A. James T. Hamby.

Q. And it was for reconstructing how many spans, do you recall?

A. Two spans.

Q. Do you recall which ones they were which were reconstructed?

A. On the north shore of the river.

Q. In the following year, 1918, it appears that there was spent on a contract for new spans the sum of $27,600, with whom was that contract made?

A. J. T. Hamby.

Q. And that was for what spans?

A. The same spans, building of the same spans.

Q. That total contract was $37,600, and expended over the two years, 1917 and 1918?

A. Right.

Q. Now, it appears in the year 1919 there was an expenditure for the replacement of piers of $5,364.27, do you recall what work was done in replacing piers in 1919?

A. It was to replace piers damaged by the ice floods in the previous winter.

Q. In the preceding winter—

MR. COBLE:

I believe the courteous thing for Mr. Hull to do would be to give us a copy of those figures. We do

not seem to have them.

THE COMMISSIONER:

You might ask Mr. Hull which one it is.

MR. HULL:

Page S3, Schedule A of Exhibit 1.

MR. HULL:

Q. Now, there is another item of $5,015.31 in 1920 for the replacement of piers for what was that expended, do you recall?

A. Those piers, many of them had been in use for many years, and because of the continual wear and tear from ice floods had loosened the stones, and we put new concrete noses on them, on the remaining piers.

Q. So that is the work that was done in 1919-20?

A. I believe so, yes.

Q. Did you put new concrete faces or noses on all of those piers?

A. Not all, there were 2 or 3 that we did not.

Q. There were 9 piers?

A. Nine piers.

Q. And you did this replacement work upon approximately 6 of them?

A. I would say about 6.

Q. Now, in 1921, 1922 and 1923 there were expenditures marked here for labor and material, in 1921, $6,433.52; 1922, $1,554.95, and 1923, $7,309.36. Now, those expenditures were for what, do you recall?

A. Well, we found that due to the heavy trucks that our floors were weak, and it was necessary to strengthen them. We put in new floor timbers, and when we were doing that we replaced the entire

floor with new planks to carry the increased traffic.

Q. Now, in strengthening the floor, state whether or not you put in new or heavier timbers and material than had theretofore been used in the bridge, that is, was it in addition to what had been used before?

A. In addition to what had been there before in the floor timbers and the joist carriers, we doubled them. They were 6 by 14, and we just doubled them, and on the joists, we put in 3 additional joist carriers the whole way over the bridge, the full length of it.

Q. So that the work done in those years consisted, if I understand it right, of adding to the physical structure that you already had?

A. That is right.

Q. It was done for the purpose of strengthening it?

A. Right.

Q. Now, did you during the period of those expenditures have the benefit and advice of either an engineer or accountant in allocating the charges that were made for those several expenses?

A. We did not.

Q. What did you do with those charges?

A. Most of it was charged up to fixed charges, and the general expense of the bridge.

Q. That is, in so far as you were able during that period you financed your bridge and your repairs out of your receipts?

A. That is right.

Q. And you charged it as expenses?

A. Yes, sir.

Q. Now, have you subsequently gone over those items of expenditure with Mr. Godfrey, an accountant employed by Main and Company and discussed with him the nature and character of the various items, expended for the purpose of determining whether or not they were proper capital charges or maintenance charges?

A. I did.

Q. And as a result of that conference between you and Mr. Godfrey has there been any change or has any adjustment been made in the property accounts of the bridge?

A. Yes, it was charged to our property account.

Q. And the result of that adjustment has been to increase your property account or decrease it?

A. Increase it.

Q. Now, the additions were first set up, I believe, in an adjusted balance sheet, an adjusted profit and loss account by the accountant?

A. By the accountant, yes.

Q. In 1923, I believe, the property account was increased by a figure approximating $225,000. Do you know upon what basis that increase in the property account was made?

A. On an estimate of it by an engineer.

Q. By Mr. Masters?

A. Mr. Masters.

Q. Made at that time. That was at the time that there was also issued $225,000 additional common stock?

A. Right.

Q. Increasing the outstanding capital stock from $25,000 as it was when your company was originally

incorporated to $250,000?

A. Right.

Q. Now in the analysis of the old bridge account to July 31, 1925, as prepared by the auditors, after they took off [put on] several capital charges, to which you have referred, there is this item, less amount received on sale of structure, $636. What is that item of $636?

A. Five hundred dollars was received on account of the old bridge.

Q. Received upon the contract for wrecking the old bridge?

A. For wrecking the old bridge. The balance was for old lumber and sash, and things that we sold.

Q. Out of the old toll house that was demolished?

A. Yes, sir.

Q. Mr. Duncan, prior to the time that you put concrete noses on the piers, there had been no concrete noses on any of the piers?

A. No.

Q. Mr. Duncan, do you receive a salary as an officer of the company?

A. I do.

Q. How much?

A. $1,200 a year.

Q. What other salaried officers are there?

A. Mr. Jennings.

Q. How much?

A. One thousand and two hundred dollars. Mr. Lynch, $1,200 and Mr. Wills, $1,200.

Q. How many toll keepers do you now have?

A. Six.

Q. And do you have them regularly salaried, each one of them?

A. We pay a regular salary.

Q. What salary?

A. Seventy-five dollars a month.

Q. To each one of them the same amount?

A. Well, now, we have one that we only pay $60 a month, and five $75—and one $60.

Q. In addition to the toll keepers do you have a superintendent?

A. We have a superintendent who cares for the bridge.

Q. And do you pay him a salary?

A. Pay him $75 a month.

Q. Is he included in the 5?

A. He is included in the 5.

Q. Do you have any regular laborers employed by the bridge company?

A. We have a woman in the office that we employ.

Q. In what capacity?

A. Takes care of our accounts, and handles the money, the toll keepers hand the money over to her.

Q. She is a clerk?

A. Yes, sir.

Q. What do you pay her?

A. Seventy-five dollars a month.

Q. Do you have any ordinary laborers, or skilled laborers on your payroll, or do you employ such laborers?

A. We just employ them as we need them.

Q. Mr. Duncan, I show you a paper marked Respondent's Exhibit No. 6, on the 3rd page of which

appears a detailed analysis of operating expenses for 1924 and for the 7 months of 1925, and an estimate for the total year 1925. That shows that in 1924 you paid salaries to officers of $4,800, those are the 4 officers to whom you referred, and the several items total $7,412.78 including salaries to toll keepers and your clerk, your superintendent and such labor as it was necessary for you to bring in from time to time. The item of $4,944.42, or the item of insurance, I presume includes fire insurance on the old structure?

A. Yes, that is right.

Q. And that I take it will show every year?

A. Every year.

Q. That has been reduced in the estimate of insurance for 1925 to $2,500, and the insurance covered by that is the insurance required to be carried by the terms of the mortgage?

A. Flood, liability and compensation.

Q. Mr. Duncan, in 1924 you paid the local county taxes of $20.83, that was paid in the county of Dauphin?

A. And the district of Reed.

Q. The local township?

A. The local township.

Q. And it is estimated that those taxes in 1925 will amount to about $50?

A. Right.

Q. You have acquired, or the company has acquired additional property?

A. Additional property.

Q. Since the tax was assessed and that made up the $20.83?

A. Yes.

Q. I understood you to say that is right?

A. Yes.

Q. Mr. Duncan, you do now have a number of bondholders and a number of preferred stockholders whom you did not have in 1924?

A. We do.

Q. They are located in many different parts of the country?

A. Sure.

Q. State whether or not it is necessary from time to time to furnish to them financial statements or send notices to them, or otherwise use the mails to communicate with them?

A. Well, we pay our dividends on our preferred stock quarterly, and there are more than 100 of those stockholders. We have, of course, to communicate with them and send them their dividend checks at those periods.

Q. Here is an item of $125 donations, no such item is contained in the list of expenditures for 1924, but it appears that during the 7 months of 1925 you did pay that much for donations, what was that for?

A. One hundred dollars was to the Polyclinic Hospital, and $25 we used for a local association.

THE COMMISSIONER:

You don't think that ought to figure in operating expenses?

MR. HULL:

No, it was just there, and I think that item will have to be eliminated. It was included in his cost, it was actual expense paid out, and in figuring up

the final results we will have to take that off.

MR. HULL:

Q. Mr. Duncan, going back to the 5th item, the Federal income tax, do you know whether that item of $6,419.26 is the tax which was assessed upon your last year's income?

A. It was, yes.

Q. And your Federal capital stock tax was the tax which was assessed and became due during the year 1925?

A. Yes, on the first of July.

Q. That I believe is a tax payable in advance to the Federal Government?

A. Yes, that is payable in advance, a fixed tax on capital stock.

Q. The item of State capital stock tax of $2,500, was that the amount which you expect to be required to pay for the year 1924 or for the year 1925?

A. Nineteen hundred and twenty-five.

Q. That is a State tax?

A. I think that is what was there, that would only be 5 mills on $425,000. That is a little high, that estimate.

Q. Well, it is 5 mills upon the actual value of your capital stock, and it will be whatever the tax officers of the Commonwealth may determine that to be, that is the fact?

A. Yes, that is true.

Q. And the figure of $2,500 is 5 mills on $500,000?

A. Yes, that is right.

Q. The $1,800 of State loans tax, is the amount of tax which you have been required to pay under

the provisions of your bonds so that they may remain in the hands of the holders free of loans tax of the State of Pennsylvania?

A. Yes, sir.

Q. The item of $151.77 is the emergency profit tax actually paid during 1925, is it?

A. Assessed by the State.

THE COMMISSIONER:

What is the status of that statute now?

MR. HULL:

I believe it has expired.

THE COMMISSIONER:

So that the emergency tax is eliminated?

MR. HULL:

However, we had to pay it.

THE COMMISSIONER:

But so far as this estimate of expense is concerned it now drops out?

MR. HULL:

This was the estimate for 1925. We actually paid that, and it is proper to be included in this estimate for the year 1925, so far as that year is concerned.

THE COMMISSIONER:

I see what you mean.

MR. HULL:

That has been paid, although that will not be in the next year's estimate.

MR. HULL:

Q. Do you know what the item of bond tax of two per cent is, Mr. Duncan?

A. It is two per cent tax on the interest on our bonds, Federal tax.

Q. Which you are also required to pay?

A. Required to pay it.

Q. Under the terms of your mortgage?

A. Yes, sir.

Q. There are one or two facts that I think you know that we have not gotten definitely from any of the preceding witnesses, although they have been referred to. One thousand nine hundred and nineteen was the year, was it not, that the road between Dauphin and Clark's Ferry on the east side of the river was constructed by the Highway Department?

A. Yes, sir.

Q. And north of Clark's Ferry to Millersburg the improvement was made in 1923, I believe?

A. I think 1922.

Q. And in that same year the road from Juniata Bridge to Liverpool was improved?

A. What was the other question, between where in 1922?

Q. Was the road between Juniata Bridge and Liverpool only improved in 1922?

A. I believe that was the year, yes.

Q. Now there is one item on page one of Respondent's Exhibit No. 6, for cinder fill at the toll house, $141.90, do you know what that was for, Mr. Duncan?

A. It was for filling up. This house is built on a piece of ground that had a hole in it, the old lock was there, and that had to be filled up.

Q. That was the amount actually spent?

A. Actually spent.

Q. State whether or not that is a permanent improvement to that property?

A. That is a permanent improvement.

Q. Now, how long have you been in the banking business, Mr. Duncan?

A. Thirty-six years.

Q. All the time connected with the Duncannon National Bank?

A. Yes, sir.

Q. Have you been familiar with the price at which land has been bought and sold in the neighborhood of the bridge company's property?

A. I have.

Q. You have had occasion to know not only the sales, but also in connection with the bank what the values of those properties were for marketing [mortgage] purposes?

A. I have.

Q. You have also the boundaries of the property that was acquired by the bridge company originally?

A. I do.

Q. And do you know the boundaries of the property duly acquired in 1924?

A. I do.

Q. Now, I call your attention particularly to the real estate which the company owned from 1914 down to 1924, at the time they acquired additional property, state whether or not $10,000 is in your opinion a fair and reasonable estimate of the value of that property as it was in 1923 or 1924?

A. Very fair, I would say a low value.

Q. A low value?

A. A low value.

Q. From your knowledge of real estate values in that vicinity, will you state whether or not the price of $2,000 paid for that ground upon which the new

superintendent's house stands is a fair and reasonable price for that ground?

A. A fair value.

Q. If anything is it slightly more or slightly less than actual value?

A. Well, the land will sell for that any time.

Q. Now, on the opposite side you purchased a piece of ground of some 19,500 square feet from the Pennsylvania Railroad Company, do you recall the price for that?

A. $350.

Q. Is that in your opinion a fair value for that piece of property?

A. Yes, sir.

Q. Now, the item of land purchased shown in Respondent's Exhibit No. 6, under miscellaneous charges is $2,550. Now, I understand that that includes $2,000 for the superintendent's house, $350 to the Pennsylvania Railroad, and that leaves a balance of $200. Do you know for what that was spent?

A. That was paid for the use of the land that is under a lease to Baron Bestecki in order to put our plant there for the erection of the bridge.

Q. That is, that was a charge not for land purchased?

A. No, that is rental really.

Q. But it is land which you were required to use during the period of construction?

A. Right.

Q. In the construction of this new bridge?

A. Right.

Q. Mr. Duncan, you have testified that in 1917

and 1918 you paid out $37,600 for the reconstruction of new spans on this bridge. How was that financed, or was that paid out of your current revenue, or was it necessary to borrow money for that purpose?

A. It was necessary to borrow money.

Q. And it appears from schedule A in the accountant's report, being the balance sheets for several years of your company, that your bonds were increased $10,000 in 1917 and $20,000 more in 1918. That total bond issue of $30,000 there was issued for the purpose of financing the construction of these new spans?

A. That is right, yes.

Q. And the money paid to Mr. Hamby, the contractor?

A. Right.

Cross Examination

MR. COBLE:

Q. You said that you are an official of the Duncannon National Bank, Mr. Duncan?

A. Yes, sir.

Q. And as a bank official are you familiar with the rental value of money?

A. The rental value of what?

Q. The rental value of money?

A. I don't get you quite.

Q. What is the rate of interest at which your bank loans money?

A. Six per cent usually.

Q. Will you be kind enough to explain to us why the Clark's Ferry Bridge Company is carrying two bridges on its books, and lists them among the

assets on which it expects to earn an income when the traveling public is using only one bridge?

MR. HULL:

Objected to, if the Commission please, as not being cross examination, and purely a matter for argument.

THE COMMISSIONER:

You must follow up the questions that Mr. Hull has put to the witness on direct examination, cross examine him on what he has been called upon to testify directly. You cannot open a new line of inquiry unless you call him as your witness.

MR. HULL:

That is really all a matter of argument afterward anyway.

THE COMMISSIONER:

That will come up in the investigation of our Bureau of Accounts and Engineering, do you realize that?

MR. COBLE:

Q. Were you one of the original incorporators of the Clark's Ferry Bridge Company?

A. I was.

Q. You made an investment in the company at the time of its organization?

A. I did.

Q. What was the amount of that investment?

A. Well, $6,250 in stock.

Q. In stock, was that your total investment at that time?

A. I bought bonds during its early history.

Q. Was that investment made later in cash?

THE COMMISSIONER:

That is immaterial. That is not a proper line of cross examination.

MR. HULL:

That is objected to.

THE COMMISSIONER:

As a matter of fact, you know that the Commission does not care about the history of this old bridge. From a public point of view we are interested in that new bridge, and our analysis of this set up of accounts and an analysis by the engineers will reveal the actual situation.

MR. COBLE:

I think it really has some bearing on the case as to the amount of cash required— .

THE COMMISSIONER:

Not a particle. I am sure you don't understand that, but that is a fact.

MR. COBLE:

I will be frank with you, I don't understand it.

THE COMMISSIONER:

Exactly. You will find that out before we are through. You will understand it is a question of what is the fair value of this property. He might say that they have invested twice what he has already said, but that is not the question. We do not care how much stock, or how many bonds are out.

MR. COBLE:

Does the question of net earnings have any bearing on the matter?

THE COMMISSIONER:

Yes, that would certainly be considered by the

Commission. I think you have not seen this before this morning, have you, this auditor's report?

MR. EBY:

No, we have not had anything.

THE COMMISSIONER:

I am speaking to you as attorney, Mr. Coble.

MR. COBLE:

No, we have not.

THE COMMISSIONER:

You have made no examination of this of any kind?

MR. COBLE:

We have not had an opportunity.

THE COMMISSIONER:

I think possibly you had better refrain from cross examination, and agree as you did with the engineer's report, to have the Bureau of Accounts and Statistics of the Commission make this analysis.

MR. COBLE:

There are certain questions that we would like to ask, and if the questions of net earnings in the future have any bearing, I would like to go ahead and ask them.

THE COMMISSIONER:

These people may show the value on their books of their property as $200,000,000. That has nothing to do with it. The amount they say their property is valued at is only taken for what it is worth.

MR. COBLE:

Q. As a banker, Mr. Duncan, and as treasurer of the bridge company, do you believe that in placing a ficticious or inflated value on the old bridge property—

MR. HULL:

That is objected to.

THE COMMISSIONER:

You see you have introduced a whole set of suggestions there, fictitious and inflation, which are a matter of debate. Of course, he will say they didn't inflate it, will he not?

MR. COBLE:

I don't know what he will say.

THE COMMISSIONER:

Q. Won't you?

A. Yes, sir.

MR. HULL:

It will not make any difference what he says.

THE COMMISSIONER:

Hardly anybody will admit an inflated value of property. Your friends all around this valley have inflated their real estate.

MR. COBLE:

I don't know about that.

THE COMMISSIONER:

Where do you live?

MR. COBLE:

In Colonial Acres. I don't believe values are inflated there.

THE COMMISSIONER:

Where is Colonial Acres?

MR. COBLE:

East of Harrisburg.

THE COMMISSIONER:

It must be a great spot if they didn't do it. Inflation is the order of the day, that is a fact, but nobody will admit it, just like they will not admit

making money. This bridge company will admit it is making no money.

MR. COBLE:

Is a question on the manner in which the cost of the superintendent's house is carried on the books in order?

THE COMMISSIONER:

Yes, of course, that is all right. Remember I do not want to limit you, but I do want you to keep this within four lines. The real problem here is the question of the rates. You could go there and accuse this bridge company of the several things which you apparently have in mind, and you would not get anywhere.

MR. EBY:

We have already done that.

THE COMMISSIONER:

You have no business to do it. That is your animus, and you introduce a situation that is not tenable. I want you to remember that word. We assume that everybody here is a gentleman and tells the truth until proven the contrary.

MR. COBLE:

We have not said that anybody has not.

THE COMMISSIONER:

I want you to remember that.

MR. COBLE:

Q. There is an item of $5,673.93 for a new superintendent's house. Does the superintendent of the bridge company make his residence in that house?

A. He does.

Q. If he lives in the house, was there taken into consideration at the time his salary was fixed, the

fact that he got the house rent free from the bridge company?

A. The superintendent of the bridge, his son and the lady who has charge of the business, they live there all together, and they have always had the use of the house, and we have just continued that arrangement.

Q. Is the amount of his salary lower than it otherwise would be in proportion to the rental that the house would bring?

A. Is the salary lower?

Q. Than it otherwise would be in proportion to the rental that the house ordinarily would bring?

A. I think not. We would have to have had that house for our office that is not only the superintendent's house, that is our office. It was necessary to have an office and heat it, and have a person there to take care of the tolls, and this house is occupied by our office woman and by the superintendent of the bridge.

MR. COBLE:

That is all.

At 12:15 o'clock p. m., the Commissioner declared a recess until 1 o'clock p. m.

After Recess

ROY F. GODFREY, a witness called in behalf of the respondent being duly sworn was examined and testified as follows on

Direct Examination

MR. HULL:

Q. What is your full name?

A. Roy F. Godfrey.

Q. You reside where?
A. Harrisburg.
Q. Are employed by whom?
A. Main and Company, certified public accountants.
Q. In what capacity?
A. As a certified public accountant.
Q. You have been engaged in that business how long?
A. Six years.
Q. Employed by Main and Company how long?
A. In all of that time.
Q. Mr. Godfrey, were you called upon to make an examination of the books and accounts of the Clark's Ferry Bridge Company?
A. Yes, sir.
Q. State the extent and scope of the examination that you made?
A. The examination made by the company which I represent included an examination of the property accounts of the bridge company for the purposes of determining whether or not all charges included therein were proper capital expenditures. It also included an examination of the various expense accounts, to determine whether or not they included any items of a capital nature.
Q. And with respect to the expenditures made by the construction of the new bridge, what was the scope and character of your examination?
A. With respect to the expenditures for the construction of a new bridge we made a detailed examination of all of the items properly chargeable against this account.

(Report on Clark's Ferry Bridge Company, July 31, 1925, by Main and Company, produced and marked Respondent's Exhibit No. 9, E. E. M., 10/24/25.)

MR. HULL:

Q. Did you make a report in writing setting forth the results of your examination?

A. We did.

Q. I show you Respondent's Exhibit No. 9, which is marked, "Report Clark's Ferry Bridge Company, July 31, 1925," is that the report to which you referred?

A. It is, sir.

Q. Now, in addition to preparing that report did you collaborate with Mr. Frank M. Masters, engineer, in preparing an estimate of the expenditures of the bridge company for the year 1925?

A. Yes, sir.

Q. And did you also determine from the books the amount of interest paid by the bridge company during the construction of the new bridge?

A. Yes, sir.

Q. Now, before taking up your report I desire to call your attention to several items in Respondent's Exhibit No. 6, as to the first group of items on page 1, Respondent's Exhibit No. 6, totaling $592,123.41, state whether or not your examination of the books of the company disclosed that those items, except the one group marked estimated have been actually paid out by the Bridge Company?

A. They have, sir.

Q. And in respect to the items for engineering and miscellaneous charges and costs of financing,

did your examination disclose that all items, except those marked "estimated" had been actually expended?

A. Yes, sir.

Q. Now, referring to the item of interest paid during construction amounting to $20,912.11, did you find from your examination of the books that that item had been actually paid?

A. Yes, sir.

Q. Did you make any deduction or allowance for interest paid during construction upon monies on deposit?

A. Yes, sir.

Q. That was deducted?

A. Yes, sir.

Q. And this represents the net figure after that deduction?

A. Yes, sir.

Q. Turning over to page 2 of the same exhibit, did you make the computation by which the items contingencies, engineering and financing were proportioned between the value of the bridge and structure carried over into the new account, and that which must be abandoned?

A. Yes, sir.

Q. Will you explain by what method you proportioned those three items?

A. The total reproduction cost new less depreciation of this bridge as set forth in Mr. Masters' report was used as a basis. The figure submitted by Mr. Masters showing the amounts, were transferred as useful to the new bridge and were taken as a total, excluding any items of contingencies,

engineering and financing. In like manner the total amount—

Q. Excluded?

A. Excluding the amount of contingencies, engineering and financing. The proportion that the first sum or the value transferred to the new bridge bore to the total value thereof was that same percentage, so that all the items of contingencies, engineering and financing, were included in that computation in detail for each item.

Q. Now, further down on that same sheet is a computation or estimated statement under earnings on the basis of one year, and the first item in that is an estimated revenue for 1925 of $115,000?

A. Yes, sir.

Q. Where did you get that figure?

A. That figure is an estimated amount based upon the information that Mr. Jennings, president of the bridge, Mr. Masters and myself.

Q. The next item is operating cost of 1925, estimated at $32,800.03, state whether or not that is an estimate of expenditures which is detailed on the next succeeding page of this exhibit?

A. Yes, sir.

Q. The next item is depreciation at the rate of two per cent, amounting to $15,880.04. State upon what basis that depreciation was computed?

A. First, immediately preceding that caption, is shown the figure of $909,585.60 representing at that time the total value of the existing structure. From that item was deducted the item of value of location, the item of allowance for working capital, and two items representing the value of real estate owned

by the company, namely, $10,000 on the same page, and on the sixth page $2,550, from this total figure of $909,000 the sum of those items was deducted, and the balance subjected to the rate of two per cent, giving this resultant figure of $15,880.04.

Q. Referring to the figure of $909,585.60, I notice that there is a reference marked immediately after it, and the footnote stating that this amount does not include contractor's loss nor the contractor's fair profit, explain what is meant by that note.

A. That means at the time this schedule or exhibit was prepared we did not have before us the necessary information to determine exactly what the contractor's loss on the job was, nor did we have what his fair margin of profit should have been on the job. For that reason we have to make our calculations on this figure.

Q. The next item in the estimated statement of net earnings is one called amortization of old bridge 10 years, $28,941.48?

A. Yes, sir.

Q. Will you state how that is computed?

A. On the same sheet, and just above it is shown a value to be amortized of $213,011.70. That represents the difference between the reproduction cost new depreciated, and that portion which is transferred as used and useful in the new bridge. This figure of $213,011.70 we deemed should be amortized over a period of 10 years, including, however, in that amortization an allowance for interest at the legal rate thereof. In that way the computation of $28,941.48 for each year of the 10 years is on a scientific scale, allowing on the reduced balance sheet

for each year interest at this legal rate, and the figure of $28,941.48 for 10 years on this scientific schedule will exactly amortize the present value of $213,011.70.

Q. State whether or not in addition to the application of your scientific formula you also worked this out in extenso to determine whether or not $28,941.48 would exactly pay out principal and interest at the end of 10 years?

A. We did so construct a schedule and found that it would exactly pay out such an amount.

Q. Turning to page 3 of that exhibit and referring to the item of Federal income tax, $6, 492.26, state for what year that is?

A. That item represents the liability of the company for taxes. Federal income tax for the year 1924 as shown on its return filed with the Federal Government.

Q. And the Federal capital stock item?

A. Represents an actual payment made in July, 1925.

Q. And the State capital stock tax item?

A. The State capital stock tax item represents an estimated tax due to the State Department, based on the fair value for taxing purposes of the capital stock of the company as of December 31, 1924.

Q. State whether or not that had been settled by the accounting officers of the Commonwealth at the time this estimate was made up?

A. It had not.

Q. The next is an estimate of State loans tax, that is what?

A. Represents the 4 mill tax to the Common-

wealth of Pennsylvania on the $450,000.00 bond issue of the Clark's Ferry Bridge Company.

Q. The emergency profits tax item, I take it represents an actual payment in 1925?

A. An actual payment, yes.

Q. The bond tax of two per cent, is what?

A. Represents two per cent Federal tax on the amount of bond interest paid annually by the Clark's Ferry Bridge Company.

Q. And the figure of $50 for local taxes is what?

A. Represents the estimated tax that the Clark's Ferry Bridge Company will be called upon to pay for the year 1925 on their property holdings at Clark's Ferry.

Q. One other thing, Mr. Godfrey, did you compute the amount of working capital included on the second page of Respondent's Exhibit No. 6?

A. Yes, sir.

Q. How did you arrive at that figure or computation of working capital in the amount of $2,733.33, what is that?

A. That represents 1/12th of the estimated operating expenses of the Clark's Ferry Bridge Company for the year 1925.

Q. And in reality is the amount of cash which the company will have to have on hand from time to time to meet its obligations?

A. Yes, sir.

Q. Turning to your report, I find on page 1 a statement that there are attached to it 6 exhibits and schedules. Schedule A consists of the balance sheets after adjustment for capital expenditures; schedule B is the profit and loss statement after an

adjustment for capital expenditures; schedule C and D are the same things before adjustment for capital expenditures. Now, state what is the relation of the first two schedules to the second two schedules?

A. The first two schedules show the balance sheets and profit and loss statements as stated after adjustments were made for capital expenditures, that is, capital expenditures during the years from 1915 to 1924 were included as operating expenses by the Clark's Ferry Bridge Company. An examination of their records revealed that these expenditures had been included, and which we have restored to capital, they were legitimate capital expenditures. The effect on the balance sheets of the company after restoring these capital expenditures is noted in schedules A and B, schedules C and D being in accordance with the books of the company.

Q. And the effect upon net earnings for the 7 years is likewise shown in schedule B?

A. Yes, that is right.

Q. Then to determine the condition of the books as they were when you examined them we turn to the last two schedules?

A. That is right.

Q. I call your attention now to schedule C, and will ask you to take up the several items of assets and liabilities and particularly stating what is comprised in each one.

A. For each year, sir?

Q. No, simply the character of the charges made to that item?

A. Under the caption "Assets" we first find, "Old bridge." That item includes from its start

the purchase price of the old bridge by the Clark's Ferry Bridge Company and the increases therein from year to year representing the additions, capital additions made by the Clark's Ferry Bridge Company and charged to that account, so that up to December 31, 1922, there were in 1923 also certain capital expenditures—no, there were no capital expenditures in the year 1923, but the difference between the value as shown of December 31, 1922, and that at December 31, 1923, represents the appreciation in the value of the old structure, based on the appraisal of Mr. Masters, engineer. That same value continues and is shown in the December 31, 1924 statement, and in the July 31, 1925 statement is slightly reduced by reason of the sale of certain of its physical equipment. The second item of "new bridge," the first which we find is in the balance sheet of December 31, 1924, and it represents an expenditure made by the company and chargeable on its books in the amount of $427,711.46. The value of July 31, 1925, represents an amount in a like account shown on the books of the company.

Q. Mr. Godfrey, referring to the increase in the old property account between 1922 and 1923, did you say that that represented an appreciation on value which took place during that year, or was that merely a revision of the book account representing what they believed the actual value to be?

A. No, it was not an appreciation due to an increase in that year.

Q. Go ahead.

A. The next item is the cash account which represents the balance of cash on hand at the end of

each year. That amount has been accepted by us without verification. The deficit account in 1915 of $458.11 represents excess of liabilities.

Q. That is the usual balance in figures?

A. That is right, and another like one as of December 31, 1919. Under the caption "liabilities"—

THE COMMISSIONER:

Before you go any further, Mr. Hull, here are three men who are still, I think, desiring enlightenment, as to why any adjustments of accounts would carry a bridge that is not now in existence into the valuation of this new bridge. Will you explain that to them?

MR. HULL:

That I think is rather an engineering proposition, and perhaps a legal proposition.

THE COMMISSIONER:

I would like for the sake of the situation to hear what he has to say about it. It is legal, it is engineering, it is everything. Now, do not take any too long, but just make whatever observation you have. Don't you think in the face of the matter that they might like enlightenment?

MR. HULL:

I think so, but I don't believe they would pay much attention to any answer the witness might make.

MR. COBLE:

That is unjustified—

THE COMMISSIONER:

I am presiding here. Will you tell us just why you set up this account in this way, or did you just take the engineer's estimate?

THE WITNESS:

Our figures or our reason for keeping the value of the old bridge in the statement as shown here has been due to the fact that on the engineer's sayso, so to speak, there was that value transferred and assigned to the new structure, not in its entirety, however, as our previous discussion shows that 213 some odd thousand dollars of that should be amortized over a period of years, but nevertheless we think that value, and it is only properly chargeable against one year, or any one period, but that the amortization, if the Commission would permit it to stand, is a value which should be amortized over future periods, because if this value of the old bridge were to be charged off the books immediately we think it would impair the condition of the company, the financial condition of the company.

MR. HULL:

The purpose, if I might endeavor to qualify it is this: We had the old bridge upon the books at its reproduction cost new less depreciation. Our engineer has testified that part of that value, amounting to some $52,000 consists of elements of value, elements of property that are carried over, but that still remain of use and useful in connection with the new structure, that if they were not there it would be necessary to construct other equipment at a cost in excess of the value of these items so carried over; that as to the remainder of the reproduction cost new of the old structure, that is a value which was destroyed by reason of traffic, which development of traffic during 1921, '23 and '24 made this old structure obsolete, and made it imperative

that they build a new structure. That property value as it existed in 1923 was destroyed. That much we believe has been placed upon the record. It is now for the Commission to say, and for the Courts to say whether or not that property value simply must disappear, or whether the owners of the bridge are entitled to have that property value, which was rendered obsolete by reason of these conditions, paid back to them by amortization over a period of 10 years, that we put it at, or a longer or shorter period as the Commission may determine. Our position is that we are entitled to have that value which was destroyed repaid to us out of future earnings, and when the time comes for argument we will present to the Commission a decision of the Supreme Court of the United States recently made.

THE COMMISSIONER:

We understand the position you take, but what we were trying to do was to give these gentlemen an insight into the method by which this value is carried into the value of the new bridge.

MR. HULL:

That is our theory, that the $52,000 is actually and physically carried over as used and useful in the new structure, that the other part is destroyed totally, never will again be used or useful in the public service, and we claim because it was destroyed we are entitled to have it repaid to us.

THE COMMISSIONER:

How do you mean destroyed?

MR. HULL:

Destroyed by the operation of obsolescence.

THE COMMISSIONER:

The forces of civilization?

MR. HULL:

The forces of civilization. Now, there may be a great deal of difference of opinion between my friend on the other side and myself as to whether we are entitled to that or not, but I believe our position is now clear.

THE COMMISSIONER:

They have already indicated that.

MR. HERRING:

Not to delay the proceeding, but Mr. Hull indicated that we were not paying any attention. On our part—

THE COMMISSIONER:

Do not talk that way.

MR. HULL:

I simply meant that they probably would not want to accept his opinion as final on this matter.

THE COMMISSIONER:

We have now disposed of that, I raised the question and we will go on.

MR. HULL:

Q. Will you resume, Mr. Godfrey?

A. In the capital liabilities under December 31, 1915, is found the item of $730, and in December 31, 1919, December 31, 1920, December 31, 1924, and July 31, 1925, are also found certain items that also represent the liability of the company on account of monies borrowed from banks, first mortgage bonds represents as its name implies, the outstanding obligation of the company on account of such a liability. Reserve for depreciation beginning with De-

cember—

Q. Just a minute. That begins with $20,000, increasing to $30,000 in 1917?

A. Yes, sir.

Q. $50,000 in 1918 where it remained until 1924, the time of the issuing of the new issue of bonds, when it increased to $450,000?

A. Yes, sir.

Q. Go ahead.

A. Reserve for depreciation beginning with the year December 31, 1921, and continuing until July 31, 1925, represents an obligation made by the Clark's Ferry Bridge Company, set up on its books, purporting to represent depreciation sustained on the old structures. Capital stock is shown at $25,000 until December 31, 1923, when it appears at $250,000. These amounts represent outstanding common stock of the Clark's Ferry Bridge Company. Capital stock is shown on the balance sheet December 31, 1924, and represents the amount of capital stock outstanding at that date. On July 31, 1925, the amount was $175,000. Surplus for the years indicated represents excess of assets over liabilities.

Q. Now, let us understand, Mr. Godfrey, that was as you found the books?

A. Yes, sir.

Q. Now, even after that examination you did not change the books any?

A. The books have not yet been changed.

Q. On the next page, schedule D, you have shown a profit and loss statement for each year as you found it upon the books?

A. Yes, sir.

Q. And as they remain upon the books?

A. Yes, sir.

Q. Will you just briefly run over this exhibit and tell what the nature and character of the charges to each of these accounts is?

A. Under the caption, "revenue," we have house rents, at the amounts indicated for each year. As previously stated by me we did not make a detailed examination, so to speak, of the revenue accounts, therefore, I am not able to testify as to just the source of the income from house rents. The income from bridge tolls shown next represents the actual figures as shown on the books of account of the Clark's Ferry Bridge Company as the revenue from tolls received for each year. Miscellaneous items in 1919 and '24 represent according to the books the sale of miscellaneous supplies and materials. Under the caption "expenses," "insurance," is as this caption implies, the expenditure of the company for insurance premiums during those years. Labor and materials in like manner. The caption "general charges" are more or less a composite account and include taxes, phone expenses, light and coal and general operating expenses not set up under any of the other captions. Under the next caption, "renewals and replacements," are the two amounts included in 1918 and '19, represents the charge on the part of the bridge company to those amounts under those captions to this profit and loss account.

Q. The next caption, "bond discount for the year 1924"?

A. Represents a charge made on the books of the bridge company for a portion of this bond dis-

count in that year. "Depreciation" beginning with the year 1921, represents a charge made on the books of the company for depreciation. "Total operating expenses" as indicated from the total gross revenue as they have indicated represents the figures shown for the net earnings for the various years. Those figures in red, starred, represent loss as shown by the books of accounts. Deducted from those figures of net earnings are the amounts of interest paid by the company in those years, leaving the figures representing net profit or loss from its entire operations, they are its net profit and loss for each period. All these periods indicate the dividends in the amounts shown thereon on the common stock of the company over to 1924, when included in that figure of $20,366 is a certain amount of dividends on the preferred stock of the company. In like manner in the final column the amount indicates a certain portion of dividends on the preferred stock. "Balance to surplus" simply indicates the difference between the net profit and the dividends paid, which was transferred to the surplus account of the company. The last line reading, "accumulated surplus" is accumulations from the additions of the preceding line.

Q. Now, Mr. Godfrey, state out of which of those expense accounts you found it necessary to take items for the purpose of transferring them to capital accounts in the readjustment which you have said you made?

A. Under four of the items, under the caption, "expenses," labor and material, general charges and renewals, and replacements.

Q. Now, turning back to page two of your report, I find in the center of the page a tabulation. Will you state what that represents?

A. It represents a summary by years showing the total for each year, and for each class of expenditure, restored by us to the old bridge account.

Q. That gives the accounts affected the amounts and the years in which the adjustments were made?

A. That is right.

Q. Now, there is a tabulation at the bottom of that page, what does that represent, Mr. Godfrey?

A. That tabulation represents the items charged for the cost of construction of the new bridge, and which were not included in the construction account of the new bridge.

Q. Now, I call your attention to schedule A, the new bridge account as of July 31, 1925, which shows that figure to be $721,590.77, and the corresponding figure in schedule C which was $697,604.01. Does this tabulation at the bottom of page two account for the difference between the other two figures?

A. Yes, sir.

Q. Now, I call your attention to schedule A of Exhibit 1—that should be put the other way, Exhibit 1 of schedule A. Will you state what that represents and how you made up that tabulation?

A. That represents an accumulation of the costs as set forth in schedule A. In other words, the vertical section of the balance sheet shown in schedule A, starting with the cost of the bridge and adding thereto capital expenditures made each year.

Q. And that as I understand includes both those things which you found upon the books to have this

charged to capital, and also those things which in the adjustment you added to the capital account?

A. Yes, sir.

Q. Now, I call your attention to Exhibit 2 of schedule A, and ask you to state what that represents?

A. That represents an analysis of the expenditures for the new bridge as of July 31, 1925.

Q. State whether or not that includes the four items shown at the bottom of page two in your report?

A. It does.

Q. This schedule does not include any payments actually made by the bridge company on account of the new bridge structure since July 31, 1925?

A. No, sir.

Q. And it does not include any payments or any work that must be done in the future to complete the bridge structure?

A. No, sir.

Q. Now, Mr. Godfrey, can you explain briefly the theory upon which you conclude that these items which have been restored to capital, should properly be included in the capital accounts?

A. We were just advised by Mr. Masters that in his opinion certain expenditures must have been made in the past 10 years that were not reflected on the books of the Clark's Ferry Bridge Company as capital expenditures. The officers of the Clark's Ferry Bridge Company turned over to us their books and records for the entire period of the company's existence. We made an examination of the capital accounts and the expense accounts, and

marked there certain items which in our opinion were questionable as to whether or not they are under our capital expenditures or maintenance expenditures. We discussed with the officers of the bridge company the exact nature of these expenditures, and were advised by them, of course, they were certain revisions in the figures which we had marked, and others which we had admitted to our calculation, and were advised that all of the items that we had discussed with them were such as were necessary to strengthen the then existing structure to properly provide for the increased traffic necessitated by the adjacent facilities.

Q. State whether or not the restoration of those capital items is based upon the theory that this bridge must always be maintained to a certain standard?

A. They were.

Q. The bridge at the time it was purchased was certainly not up to that standard?

A. No, sir.

Q. And these items of capital expenditure represented the expenditures necessary to restore that bridge to that standard?

A. Yes, sir.

Cross Examination

MR. EBY:

Q. Your Exhibit 6, you have there an estimated statement of net earnings of $37,378.45, when did you make that estimate?

A. That estimate has been made within the past two weeks.

Q. The past two weeks. Then in your Exhibit

9, Schedule B, you have 1925, July 31, net earnings of $44,956.35, is that right?

A. Schedule B?

Q. Yes.

A. That is right.

Q. Then according to schedule B of your Exhibit 9, the amount of $44,956 is greatly in excess of your estimate in your Exhibit 6 for the net earnings of the Clark's Ferry Bridge Company, and that estimate was made after that statement on July 31 had been drawn up, is that right?

A. That is right.

MR. HERRING:

Q. In examining the books of the old bridge company and its business, did you find any items there to care for any depreciation?

A. Did we find items caring for depreciation?

Q. Of the old bridge?

A. Yes, if you will refer to schedule C, it shows the status of the accounts as carried on the books, and you will find certain amounts for depreciation.

Q. Accounts against the old bridge for depreciation?

MR. HULL: Just a minute, is that schedule C?

THE WITNESS:

It is schedule C or D, either one will reflect it.

MR. HULL:

Q. Schedule D is the one that shows depreciation by name?

A. That is right, schedule D.

MR. HERRING:

Q. Then according to that the accounts on the old structure do provide a means to pay for its re-

placement as it depreciated through those charges against capital for that purpose?

A. Beginning with the year 1921.

MR. COBLE:

Q. In your Exhibit No. 6 you have the item interest paid during construction, what does that represent?

A. Interest paid during construction representing the payment of bond interest from July, 1924, to and including the month of May, 1925, plus interest paid on bills. In other words, money borrowed from banks by the Clark's Ferry Bridge Company during the period of construction, less interest received by the Clark's Ferry Bridge Company on account of monies on deposit at the several banks under the terms of the trust agreement.

Q. Now, is the amount of your interest deductible from the gross earnings in order to arrive at the—

A. The item of $20,000?

Q. Yes.

A. There were no earnings from the source on which this money was used. In other words, you understand that this money was used for the construction of the new bridge, and the new bridge was not open, therefore there were no earnings from the new bridge to deduct it.

Q. The amount of interest then was not deducted from gross earnings?

A. No, it could not be.

Q. Has the State loans tax been paid?

A. The State loans tax had not been paid up to the time of our examination. That you understand is paid on a bill sent out by the Auditor General.

MR. HULL:

Q. And the settlement of the capital stock and corporate loans taxes are made together?

A. That is right.

MR. HULL:

I want to recall Mr. Duncan for just one question.

P. F. DUNCAN recalled.

Direct Examination

MR. HULL:

Q. You have testified that for some time you have been in charge of the actual business of this company. State approximately what amount of money it is necessary for you to have on hand constantly to meet your bills and expenses as they fall due?

A. About $2,500, I would say.

(Respondent's Exhibits 5 and 6 are included in Complainant's Exhibit No. 1 in the present case.)

RESPONDENT'S EXHIBIT No. 7

Report on Financing, Valuation, and Appraisal of Clark's Ferry Bridge for Clark's Ferry Bridge Company

December 17, 1923.

Mr. William Jennings, Pres.,
Clark's Ferry Bridge Company,
Harrisburg, Pa.

Dear Sir:

In accordance with your instructions there is

given herewith an appraisal of the value of property owned and operated by the Clark's Ferry Bridge Company.

In preparing this valuation a careful study of all records existing to-day on the life and history of the bridge has been made. The property owned by the Company has been examined and a careful inspection made of the bridge to determine its present physical condition and useful life.

Organization of Company

The Clark's Ferry Bridge Company is an organization existing under the laws of the State of Pennsylvania in accordance with a certificate of Incorporation dated May 20th, 1915, issued by the Commonwealth of Pennsylvania in compliance with an act of the General Assembly of the Commonwealth of Pennsylvania approved the 29th day of April A. D. 1874 "The said corporation is formed for the construction and acquisition and improvement, operation, and maintenance of a bridge and approaches thereto over the Susquehanna River from a point on the highway leading from Harrisburg to Sunbury, being route one of the State Highways to a point on the opposite side of said river at the southern end of Duncan's Island, Reed Township, Dauphin County, Pennsylvania," where it connects with various other important routes of the State highways.

Description of Property

The Clark's Ferry Bridge Company as it exists to-day owns and operates as a toll bridge, a wooden truss structure over the Susquehanna River located

as described above, which was acquired by purchase from the Pennsylvania Railroad Company, together with the approaches and land at either end of the bridge and other property, consisting of toll houses, buildings, timber, etc., used in the maintenance and operation of the bridge.

The bridge proper consists of ten spans of a combination, wooden truss and wooden arch, type of construction, well braced, and carrying a floor of heavy timber construction. The total length of the structure is 2,074 feet, face to face, of end abutments. The bridge as originally built was designed to carry two lines of highway traffic and a tow path on the lower or downstream side of the bridge. In order to take care of the extra loads imposed by the tow path, the downstream truss is a double truss much heavier than the upstream truss.

The canal traffic and tow path across the bridge has been abandoned for a number of years, and the timber work supporting the tow path has all been removed. In order to take care of the increased highway loadings, due to automobile traffic, a line of fences has been erected through the bridge, reducing the width to a single line of traffic. Passing points are provided over each pier and the traffic is thrown next to the heavy double truss for the greater portion of each span.

History of Structure

The original bridge over the Susquehanna River at Clark's Ferry as constructed by the State of Pennsylvania, under the direction of the State Canal Commission as part of the system of canals built

and operated by the Commonwealth. This bridge was erected in connection with a dam over the Susquehanna River at Clark's Ferry for the purpose of transporting the ferry boats across the river in the pool of the dam. At this point the canal branched, one line of the canal continuing up the right side of the Susquehanna River to points in the northern part of the State, and the other line of the canal crossing the river at Clark's Ferry and thence up the Juniata River to points in the western part of the State.

Long and extensive studies were made at the time the canal was built to determine the best method of crossing the Susquehanna River at this point. Finally, on the recommendations and estimate of cost submitted by the Canal Engineers, it was decided to construct a bridge over the Susquehanna River carrying highway traffic, this bridge to have a tow path, on the downstream side of same, carrying cars to which were fastened the tow lines of the boats. These cars were drawn over the bridge by mules. This plan was considered more economical than the construction of an aqueduct across the river such as was built at other points along the canal.

The records of the Pennsylvania State Canal Commission, dated December 24, 1827, show that a resolution was passed, authorizing the construction of a bridge with a tow path across the Susquehanna and instructing Mr. Guilford, their Engineer, to prepare plans and contracts for same.

This bridge, built in accordance with the plans of Mr. Guilford, was opened for traffic late in 1829 or early in 1830. It was accepted as completed by the

Canal Commissioners on March 18th, 1830.

At the time the bridge was erected there was much discussion among the Engineers regarding the type of truss to be adopted. It is shown in the records of the Canal Commission that the bridge was reconstructed about January 12th, 1852, but there is nothing to show the type of superstructure erected at that time.

On January 25th, 1857, the State of Pennsylvania sold to the Pennsylvania Railroad Company, for the sum of $7,500,000, the main line of the Pennsylvania Canal from Columbia to Pittsburgh. This sale transferred to the Pennsylvania Railroad Company the Clark's Ferry Bridge and dam. The Pennsylvania Railroad Company finally abandoned the canal operation and according to deeds dated June 16, 1915, they sold to Mr. Christian W. Lynch that portion of the canal embracing the Clark's Ferry Bridge and Mr. Christian W. Lynch in turn transferred same to the present owners of the Clark's Ferry Bridge Company.

Throughout its life, this bridge has been operated as a toll bridge; first from 1830 to 1857 (27 years) by the Commonwealth; next from 1857 to 1915 (58 years) by the Pennsylvania Railroad Company; since 1915 to date (8 years) by the present owners.

Original Cost

Mr. Guilford's estimate submitted to the Pennsylvania Canal Commissioners for the construction of the work at Clark's Ferry was $225,088.00. This estimate, of course, did not include any property rights, engineering costs, legal expenses, or similar items, this being the bare cost of construction.

The Canal Commissioners awarded a contract to Ryon & Baldwin under date of February 17, 1828, for the construction of this bridge. This contract called for a lump sum of $43,600.00 to be paid for the wood work. In addition to this, they were to receive $2.50 per perch for rubble stone fill. All other costs, such as the cut stone work in piers, abutments, walls, and other items were to be paid on the basis of monthly estimates of cost made by the Engineers of the Canal and the State was to furnish all cement. This contract called for the bridge to be finished in May, 1829.

It is not possible to find anything in the records of the State Canal Commission showing the final total cost of the bridge. There was considerable dispute over the quality of the workmanship and two Engineers, Mr. Charles T. Whipple and Edward F. Gay, were appointed to make a survey of the bridge and report to the Commissioners regarding the acceptance of same. In this report they state that the masonry is first class in every respect but that some of the timber work is not as good as it should be. Apparently some of the light floor framing was cut from sap timber instead of being heart timber as specified. However, the bridge was finally approved and full payment made to the contractors on same.

From the above it will be seen that it is difficult to arrive at an exact original cost figure. However, considering all of the data available and adding reasonable percentages for engineering costs, legal expenses, supervision, real estate, land rights and so forth, a conservative original cost estimate would approximate $300,000.

Going Concern Value

As regards the value of your property as a going concern, the conditions are rather peculiar. When this property was acquired from the Pennsylvania Railroad Company in 1915 you bought what was in reality a liability to the Railroad Company, inasmuch as the earnings on the bridge from tolls collected were not sufficient to pay operating expenses and the Pennsylvania Railroad Company at that time were faced with the possibility of having to reconstruct the bridge due to its poor physical condition. This together with the fact that they would have to maintain same as a going concern, and to the large risk from fire and flood involved, this structure no doubt was looked upon by the Pennsylvania Railroad Company as a liability. However, since that time there has been an enormous increase in automobile traffic. Good roads have been constructed on either side of the bridge and the earnings from the tolls over same have increased rapidly; so that now, instead of the bridge being a liability as it was at the time it was acquired and up to 1920, it is now a very valuable asset.

The Company is chartered by the State of Pennsylvania to operate perpetually a toll bridge at this point, the location of which is strategic. It is not possible to build a competing structure at any nearby site which would connect the main arteries of traffic such as your structure does, at the same cost, the river at this point being narrow and foundation condition favorable for the erection of a bridge of this length at a minimum cost. A bridge erected at

any other point near by would necessitate a much larger investment.

On account of the increases in traffic, earnings on this bridge at the present time would justify a structure costing a half million dollars or more, paying a fair return on this investment at toll rates which are reasonable and low compared with structures of the same class maintained at other points in the Country and a going concern valuation of your existing property on which you could pay a reasonable return from its present earnings would approximate $450,000.00 based on present gross earning power. There is given herewith a statement of the gross earnings on the bridge from 1908 to date. It is of interest to note that in 1908 the gross earnings were only $1,340.00 and at the time the bridge was sold to the present company these gross earnings had advanced to only $4,-779.67. The annual operating costs, exclusive of interest and depreciation charges, including only salaries of toll collectors, maintenance, insurance and taxes will be in excess of $10,000.00 per year. So that in 1917 the gross earnings just about met operating expenses, then in 1919 the earnings fell off due to reconstruction work on the highways and the bridge.

From 1920 to date the earnings have been advancing rapidly and this year, 1923, they should exceed $55,000.00. Allowing $10,000.00 for operating expenses and maintenance, this would leave $45,000.00 for interest on investment and depreciation, which would be 10% on $450,000.00.

Due to the limited capacity of the bridge during

peak hours of traffic, the present structure has about reached its maximum earning power. It is not believed that the gross earnings on the present structure will ever exceed $65,000.00 per year. Public agitation against the inadequate facilities provided will either force a reduction in toll rates, or the construction of a new bridge capable of handling the traffic during rush hours.

At a maximum earning of $65,000.00 with operation and maintenance at $15,000.00, the structure would show a 10% return on $500,000.00.

Reproduction Cost New

There is attached hereto an estimate of the reproduction cost of your structure. In making this estimate a very thorough and careful inspection was made of the bridge to determine the amount of depreciation on the various items and a very careful survey made together with drawings which are handled herewith to determine the quantities of material in the structure as it exists to-day. In fixing unit prices for the reproduction cost, it was decided to use an average price embracing ten years from 1913 to date which period of ten years' time embraces low costs as well as high costs. However, the extremely high prices during the war years when it was almost impossible to secure materials of this kind have been eliminated. These average unit prices are estimated on material erected in place after a careful study of much price and cost data, compiled by various railroads and other authorities on costs of this kind, together with data compiled from actual construction costs with which I have

had experience and am familiar. To the actual unit quantity prices there have been added the usual percentages covering omissions and contingencies (5%), engineering (6%), and cost of financing, (2%), together with an item covering the cost of real estate and land owned by the Bridge Company. This gives a reproduction cost new of $373,832.66.

Depreciation

Owing to the peculiar character of this structure and the unusual quality of material used, also taking into account that various parts of the structure have been replaced from time to time due to losses from storms, and damage by floods, it is practically impossible to arrive at a depreciation of the basis of years of useful life. Therefore, it was decided to make a careful physical inspection of the structure and appraise the percentages of depreciation of the various items. These percentages have been applied to the items as classified in the statement shown and the present value of the actual cost of construction depreciated, reached in this manner, to which figures have been added the percentages for omissions and contingencies (5%), engineering (6%), and cost of financing (2%), together with undepreciated items of real estate, and this gives an appraised value of the structure depreciated of $265,112.86.

Summary

The various values reached from this appraisal are as follows:

Original cost	$300,000.00
Going concern value as of date	450,000.00
Reproduction new ten year average	373,832.66
Reproduction new depreciated	265,112.86

Franchise Value

It will be noted in the above value that there has been no consideration whatever given to a very large item of value which is rather intangible; namely that of your chartered right under the State of Pennsylvania to operate perpetually a toll bridge at Clark's Ferry. This undoubtedly has a considerable value, which taken together with the very strategic location of this bridge at a point where you connect the important highways of the State carrying heavily congested traffic, might be appraised at as much as one-third of the construction cost.

Respectfully submitted,

F. M. Masters,
Consulting Engineer.

SCHEDULE ATTACHED TO RESPONDENT'S EXHIBIT No. 7

REPRODUCTION COST NEW ESTIMATE CLARK'S FERRY BRIDGE
AVERAGE PRICES 1913-1923

1-212′ Span Timber Work	Quantity	Unit Price	Cost New Total Amt.	Dep.	Value Depreciated
Framed Timber Work	90,573 ft. B. M.	$85.00 M	$7,698.70	15%	$6,543.90
Roof and Siding Sheathing	15,080 ft. B. M.	50.00 M	754.00	50%	377.00
Floor Planking	14,840 ft. B. M.	75.00 M	1,113.00	40%	667.80
Shingles	123 Squares	15.00	1,845.00	60%	738.00
Iron Bolts and Rods	6,918 lbs.	0.10	691.80	50%	345.90
C. I. O. G. Washers	4,646 lbs.	0.05	230.30	....	230.30
Malleable Forgings Mach.	1,650 lbs.	0.30	495.00	....	495.00
Total for One Span			$12,837.80		$9,397.90
Value per Lin. Ft. of Bridge—New			60.50		44.33
2,088′—Total Length, Value Timber Work			126,324.00		92,561.04
Masonry					
9 Piers, 850 cu. yds., 7,650 @ $18.00			137,700.00	40%	82,620.00
2 Abutments, 1,272 @ $18.50			23,532.00	40%	14,119.20
Retaining Walls, 933 @ $16.00			14,928.00	50%	7,464.00
Fill for Approaches, 8,000 @ $1.50			12,000.00	....	12,000.00
Toll House			4,000.00	50%	2,000.00
Approach Paving and Railing			2,000.00	50%	1,000.00
			$320,484.00		$211,764.24
Omissions and Contingencies, 5%			16,024.20		16,024.20
			336,508.20		227,788.40
Engineering, 6%			20,190.49		20[illegible].49
			$356,698.69		$247,978.89
Cost of Financing, 2%			7,133.97		7,133.97
			$363,832.66		$255,112.86
Cost of Real Estate and Land Owned			10,000.00		10,000.00
			$373,832.66		$265,112.86
Franchise and Charter Value					....

CLARK'S FERRY BRIDGE COMPANY

Annual Gross Revenue

1906	$ 1,340.20	P. R. R.
1909	1,378.78	"
1910	1,644.28	"
1911	1,829.04	"
1912	2,383.25	"
1913	4,239.38	"
1914	4,779.67	"
1915	7,785.33	Clark's Ferry Bridge Co.
1916	10,180.65	" " " "
1917	13,555.83	" " " "
1918	16,791.96	" " " "
1919	10,976.56	" " " "
1920	16,561.78	" " " "
1921	27,059.00	" " " "
1922	30,891.95	" " " "
1923	57,000.00	" " " " (estimated)

RESPONDENT'S EXHIBIT No. 9

MAIN AND COMPANY
Accountants and Auditors, Harrisburg, Pa.

September 28, 1925.

William Jennings, President,
Clark's Ferry Bridge Company,
Harrisburg, Pennsylvania.

DEAR SIR:

In accordance with instructions, we have made an examination of the books, records and accounts of the

CLARK'S FERRY BRIDGE COMPANY

from the inception of the company in 1915 to July 31, 1925, and the results thereof are set forth in the appended Schedules and Exhibits, which are as follows:

SCHEDULE "A"—Balance Sheets after Adjustment for Capital Expenditures.

EXHIBIT I—Analysis of Old Bridge Account to July 31, 1925.

EXHIBIT II—Analysis of Expenditures for New Bridge to July 31, 1925.

SCHEDULE "B"—Profit and Loss Statements after Adjustment for Capital Expenditures.

SCHEDULE "C"—Balance Sheets before Adjustment for Capital Expenditures.

SCHEDULE "D"—Profit and Loss Statements before Adjustment for Capital Expenditures.

The scope of our examination was limited to the preparation of such statements as would show the expenditures of the company for the old bridge and the construction of the new bridge.

Under date of September 30, 1915, the Clark's Ferry Bridge Company acquired title to the old bridge from Christian W. Lynch upon payment of $3,000.00 in cash, $20,000.00 first Mortgage Bonds, and $22,000.00 Common Stock of the Clark's Ferry Bridge Company.

Certain expenditures were, with the approval of your officers, capitalized and restored to the old bridge account, the nature and amount thereof being as follows:

Year	Material	Labor	Construction Contract	Replacement of Pier	Incorporation Expense	Total
1915	.....	.....	.....	.....	$819.35	$819.35
1917	$585.87	$161.00	.....	.....	.....	746.87
1918	.....	.....	$7,600.00	.....	.....	7,600.00
1919	337.78	254.95	.....	$4,771.54	.....	5,364.27
1920	605.02	174.44	.....	.....	.....	779.46
1921	3,387.77	3,045.75	.....	.....	.....	6,433.52
1922	1,213.35	341.60	.....	.....	.....	1,554.95
1923	4,332.06	2,977.30	.....	.....	.....	7,309.36
T't'ls	$10,461.85	$6,955.04	$7,600.00	$4,771.54	$819.35	$30,607.78

We were advised by your officers that the above items represented expenditures necessary to improve and strengthen the then existing structure in order to provide for the increased traffic.

To the cost of the new bridge carried on your books at July 31, 1925, in the amount of $697,604.01, we have added the following expenditures, which in our opinion may be properly capitalized:

Engineering Services	$ 1,000.00
Bond Discount	1,950.00
Federal Tax on Bond Interest	158.40
Interest Paid During Construction	20,878.36
Total	$23,986.76

Respectfully submitted,
MAIN AND COMPANY,
Certified Public Accountants

SCHEDULE "A", EXHIBIT I.

CLARK'S FERRY BRIDGE COMPANY

ANALYSIS OLD BRIDGE ACCOUNT TO JULY 31, 1925

1915	Cash	$ 3,000.00	
	First Mortgage Bonds	20,000.00	
	Common Stock	22,000.00	
	Incorporation Expense	819.35	
			$45,819.35
1917	Payment on Contract, New Spans, etc.	$10,000.00	
	Labor and Material	746.87	
			10,746.87
1918	Payment on Contract, New Spans, etc.		27,600.00
1919	Replacement of Piers		5,364.27
1920	Replacement of Piers	$5,015.31	
	Labor and Material	779.46	
			5,794.77

Respondent's Exhibit No. 4
Exhibits in Former Case (Comp. Dkt. No. 6611)

1921	Labor and Material	6,433.52
1922	Labor and Material	1,554.95
1923	Labor and Material	7,309.36
	Total Cost	$110,623.09
	Plus: Appreciation on Basis of Appraised Value	225,000.00
	Total Value	$335,623.09
	Less: Amounts Received on Sale of Structure	636.00
	Total Book Value of Old Bridge, July 31, 1925	$334,987.09

NOTE: Subject to attached comment.

SCHEDULE "A"

CLARK'S FERRY BRIDGE COMPANY

BALANCE SHEETS AFTER ADJUSTMENT FOR CAPITAL EXPENDITURES

Assets	Dec. 31, 1915	Dec. 31, 1916	Dec. 31, 1917	Dec. 31, 1918	Dec. 31, 1919	Dec. 31, 1920	Dec. 31, 1921	Dec. 31, 1922
Old Bridge	$45,819.35	$45,819.35	$56,566.22	$84,166.22	$89,530.49	$95,325.26	$101,758.78	$103,313.73
New Bridge	.....	.....	.....	.....	.....	.....	.....	.....
Cash	271.89	1,404.73	1,700.34	355.22	104.55	105.00	420.42	3,748.58
Totals	$46,091.24	$47,224.08	$58,266.56	$84,521.44	$89,635.04	$95,430.26	$102,179.20	$107,062.31
Liabilities								
Bills Payable	$730.00	.....	.....	.....	$5,100.00	$5,000.00	.....	.....
Bonds Outstanding	20,000.00	$20,000.00	$30,000.00	$50,000.00	$50,000.00	$50,000.00	$50,000.00	$50,000.00
Capital Stock (Common)	25,000.00	25,000.00	25,000.00	25,000.00	25,000.00	25,000.00	25,000.00	25,000.00
Capital Stock (Preferred)	.....	.....	.....	.....	.....	.....	.....	.....
Surplus	361.24	2,224.08	3,266.56	9,521.44	9,535.04	15,430.26	27,179.20	32,062.31
Totals	$46,091.24	$47,224.08	$58,266.56	$84,521.44	$89,635.04	$95,430.26	$102,179.20	$107,062.31

NOTE: Subject to attached comment.

SCHEDULE "B"

CLARK'S FERRY BRIDGE COMPANY

PROFIT AND LOSS STATEMENTS AFTER ADJUSTMENT FOR CAPITAL EXPENDITURES

Revenue	1915	1916	1917	1918	1919	1920	1921	1922
House Rents	$35.00	$133.00	$146.50	$79.50	$75.00	$90.00	$64.50	$111.00
Bridge Tolls	2,078.85	10,180.65	13,555.83	16,791.96	10,976.56	16,561.78	27,059.00	30,891.95
Miscellaneous	.....	.....	.....	.....	100.00	.....	.....	.....
Total Gross Revenue	$2,113.85	$10,313.65	$13,702.33	$16,871.46	$11,151.56	$16,651.78	$27,123.50	$31,002.95
Expenses								
Salaries	$390.00	$1,605.00	$2,930.00	$5,445.00	$5,520.00	$5,210.00	$6,032.50	$6,248.33
Taxes	.....	46.88	220.00	1,062.14	304.00	638.77	871.90	1,281.68
Insurance	883.70	1,020.00	1,036.14	1,186.56	1,104.72	1,045.11	1,334.80	1,333.47
Labor	76.95	328.00	379.90	125.69	432.75	174.50	333.10	464.45
Materials	10.00	182.84	14.03	72.94	106.15	109.30	69.40	.....
General Expense	91.96	298.14	579.78	403.85	495.42	323.63	534.61	291.91
Total Operating Expenses	$1,452.61	$3,480.86	$5,159.85	$8,296.18	$7,963.04	$7,501.31	$9,176.31	$9,619.84
Net Earnings	$661.24	$6,832.79	$8,542.48	$8,575.28	$3,188.52	$9,150.47	$17,947.19	$21,383.11
Less: Interest Paid	300.00	1,219.95	1,500.00	2,320.40	3,174.92	3,255.25	3,198.25	3,000.00
Net Profit	$361.24	$5,612.84	$7,042.48	$6,254.88	13.60	$5,895.22	$14,748.94	$18,383.11
Dividends Paid	.....	3,750.00	6,000.00	.....	.....	.....	3,000.00	13,500.00
Balance to Surplus	361.24	1,862.84	1,042.48	6,254.88	13.60	5,895.22	11,748.94	4,883.11
Accumulated Surplus	361.24	2,224.08	3,266.56	9,521.44	9,535.04	15,430.26	27,179.20	32,062.31

NOTE: Subject to attached comment.

SCHEDULE "A"

CLARK'S FERRY BRIDGE COMPANY

BALANCE SHEETS AFTER ADJUSTMENT FOR CAPITAL EXPENDITURES

Dec. 31, 1916	Dec. 31, 1917	Dec. 31, 1918	Dec. 31, 1919	Dec. 31, 1920	Dec. 31, 1921	Dec. 31, 1922	Dec. 31, 1923	Dec. 31, 1924	July 31, 1925
$45,819.35	$56,566.22	$84,166.22	$89,530.49	$95,325.26	$101,758.78	$103,313.73	$335,623.09	$335,623.09	$334,987.09
.....	.....	.....	.....	.....	.....	.....	1,000.00	438,245.52	721,590.77
1,404.73	1,700.34	355.22	104.55	105.00	420.42	3,748.58	7,464.98	187,670.96	1,684.59
$47,224.08	$58,266.56	$84,521.44	$89,635.04	$95,430.26	$102,179.20	$107,062.31	$344,088.07	$961,539.57	$1,058,262.45
.....	.....	.....	$5,100.00	$5,000.00	.....	.....	.....	$14,000.00	$70,000.00
$20,000.00	$30,000.00	$50,000.00	$50,000.00	$50,000.00	$50,000.00	$50,000.00	$50,000.00	450,000.00	450,000.00
25,000.00	25,000.00	25,000.00	25,000.00	25,000.00	25,000.00	25,000.00	250,000.00	250,000.00	250,000.00
.....	.....	.....	.....	.....	.....	.....	.....	156,300.00	175,000.00
2,224.08	3,266.56	9,521.44	9,535.04	15,430.26	27,179.20	32,062.31	44,088.07	91,239.57	113,262.45
$47,224.08	$58,266.56	$84,521.44	$89,635.04	$95,430.26	$102,179.20	$107,062.31	$344,088.07	$961,539.57	$1,058,262.45

SCHEDULE "B"

CLARK'S FERRY BRIDGE COMPANY

PROFIT AND LOSS STATEMENTS AFTER ADJUSTMENT FOR CAPITAL EXPENDITURES

1916	1917	1918	1919	1920	1921	1922	1923	1924	1925 to July 31
$133.00	$146.50	$79.50	$75.00	$90.00	$64.50	$111.00	$106.00	$36.50	.....
10,180.65	13,555.83	16,791.96	10,976.56	16,561.78	27,059.00	30,891.95	60,010.71	90,203.50	$58,950.58
.....	.....	.....	100.00	.....	.....	.....	.....	655.10	51.86
$10,313.65	$13,702.33	$16,871.46	$11,151.56	$16,651.78	$27,123.50	$31,002.95	$60,116.71	$90,895.10	$59,002.44
$1,605.00	$2,930.00	$5,445.00	$5,520.00	$5,210.00	$6,032.50	$6,248.33	$6,817.48	$7,200.00	$4,900.00
46.88	220.00	1,062.14	304.00	638.77	871.90	1,281.68	2,111.41	4,470.03	3,792.80
1,020.00	1,036.14	1,186.56	1,104.72	1,045.11	1,334.80	1,333.47	8,286.55	4,946.42	2,062.97
328.00	379.90	125.69	432.75	174.50	333.10	464.45	688.22	5,012.78	2,357.50
182.84	14.03	72.94	106.15	109.30	69.40	.....	422.59	.....	.....
298.14	579.78	403.85	495.42	323.63	534.61	291.91	264.70	802.61	932.82
$3,480.86	$5,159.85	$8,296.18	$7,963.04	$7,501.31	$9,176.31	$9,619.84	$18,590.95	$22,431.84	$14,046.09
$6,832.79	$8,542.48	$8,575.28	$3,188.52	$9,150.47	$17,947.19	$21,383.11	$41,525.76	$68,463.26	$44,956.35
1,219.95	1,500.00	2,320.40	3,174.92	3,255.25	3,198.25	3,000.00	3,000.00	1,500.00	3,345.72
$5,612.84	$7,042.48	$6,254.88	13.60	$5,895.22	$14,748.94	$18,383.11	$38,525.76	$66,963.26	$41,610.63
3,750.00	6,000.00	.....	.....	.....	3,000.00	13,500.00	26,500.00	19,811.76	19,587.75
1,862.84	1,042.48	6,254.88	13.60	5,895.22	11,748.94	4,883.11	12,025.76	47,151.50	22,022.88
2,224.08	3,266.56	9,521.44	9,535.04	15,430.26	27,179.20	32,062.31	44,088.07	91,239.57	113,262.45

SCHEDULE "C"

CLARK'S FERRY BRIDGE COMPANY

BALANCE SHEETS BEFORE ADJUSTMENT FOR CAPITAL EXPENDITURES

Assets	Dec. 31, 1915	Dec. 31, 1916	Dec. 31, 1917	Dec. 31, 1918	Dec. 31, 1919	Dec. 31, 1920	Dec. 31, 1921	Dec. 31, 1922
Old Bridge	$45,000.00	$45,000.00	$55,000.00	$75,000.00	$75,000.00	$80,015.31	$80,015.31	$80,015.31
New Bridge	.....	.....	.....	.....	.....	.....	.....	.....
Cash	271.89	1,404.73	1,700.34	355.22	104.55	105.00	420.42	3,748.58
Deficit	458.11	.....	.....	.....	4,995.45	.....	.....	.....
Totals	$45,730.00	$46,404.73	$56,700.34	$75,355.22	$80,100.00	$80,120.31	$80,435.73	$83,763.89
Liabilities								
Bills Payable	$730.00	.....	.....	.....	$5,100.00	$5,000.00	.....	.....
First Mortgage Bonds	20,000.00	$20,000.00	$30,000.00	$50,000.00	$50,000.00	50,000.00	$50,000.00	$50,000.00
Reserve for Depreciation	.....	.....	.....	.....	.....	.....	2,667.18	5,334.36
Capital Stock (Common)	25,000.00	25,000.00	25,000.00	25,000.00	25,000.00	25,000.00	25,000.00	25,000.00
Capital Stock (Preferred)	.....	.....	.....	.....	.....	.....	.....	.....
Surplus	.....	1,404.73	1,700.34	355.22	.....	120.31	2,768.55	3,429.53
Totals	$45,730.00	$46,404.73	$56,700.34	$75,355.22	$80,100.00	$80,120.31	$80,435.73	$83,763.89

NOTE: Subject to attached comment.

SCHEDULE "D"

CLARK'S FERRY BRIDGE COMPANY

PROFIT AND LOSS STATEMENTS BEFORE ADJUSTMENT FOR CAPITAL EXPENDITURES

(Note—Italics indicate losses or deficits)

Revenue	1915	1916	1917	1918	1919	1920	1921	1922
House Rents	$35.00	$133.00	$146.50	$79.50	$75.00	$90.00	$64.50	$111.00
Bridge Tolls	2,078.85	10,180.65	13,555.83	16,791.96	10,976.56	16,561.78	27,059.00	30,891.95
Miscellaneous	.....	.....	.....	.....	100.00	.....	.....	.....
Total Gross Revenue	$2,113.85	$10,313.65	$13,702.33	$16,871.46	$11,151.56	$16,651.78	$27,123.50	$31,002.95
Expenses								
Insurance	$883.70	$1,020.00	$1,036.14	$1,186.56	$1,104.72	$1,045.11	$1,334.80	$1,333.47
Labor	76.95	328.00	540.90	125.69	687.70	174.50	3,229.04	806.05
Materials	10.00	182.84	599.90	72.94	443.93	714.32	3,457.17	1,213.35
General Charges	1,301.31	1,950.02	3,729.78	6,910.99	6,319.42	6,346.84	7,588.82	7,821.92
Renewals and Replacements	.....	.....	.....	7,600.00	4,771.54	.....	.....	.....
Bond Discount	.....	.....	.....	.....	.....	.....	.....	.....
Depreciation	.....	.....	.....	.....	.....	.....	2,667.18	2,667.18
Total Operating Expenses	$2,271.96	$3,480.86	$5,906.72	$15,896.18	$13,327.31	$8,280.77	$18,277.01	$13,841.97
Net Earnings	*$158.11*†	$6,832.79	$7,795.61	$975.28	*$2,175.75*†	$8,371.01	$8,846.49	$17,160.98
Less: Interest Paid	300.00	1,219.95	1,500.00	2,320.40	3,174.92	3,255.25	3,198.25	3,000.00
Net Profit	*$458.11*†	$5,612.84	$6,295.61	*$1,345.12*†	*$5,350.67*†	$5,115.76	$5,648.24	$14,160.98
Dividends Paid	.....	3,750.00	6,000.00	.....	.....	.....	3,000.00	13,500.00
Balance to Surplus	*$458.11**	1,862.84	295.61	*1,345.12*†	*5,350.67*†	5,115.76	2,648.24	660.98
Accumulated Surplus	*$458.11**	1,404.73	1,700.34	355.22	*4,995.45**	120.31	2,768.55	3,429.53

† Loss. * Deficit. NOTE: Subject to attached comment.

SCHEDULE "C"

CLARK'S FERRY BRIDGE COMPANY

BALANCE SHEETS BEFORE ADJUSTMENT FOR CAPITAL EXPENDITURES

	Dec. 31, 1916	Dec. 31, 1917	Dec. 31, 1918	Dec. 31, 1919	Dec. 31, 1920	Dec. 31, 1921	Dec. 31, 1922	Dec. 31, 1923	Dec. 31, 1924	July 31, 1925
.00	$45,000.00	$55,000.00	$75,000.00	$75,000.00	$80,015,31	$80,015.31	$80,015.31	$305,015.31	$305,015.31	$304,379.31
..	.....	.....	.....	.....	.....	.....	.....	.....	427,711.46	697,604.01
.00	1,404.73	1,700.34	355.22	104.55	105.00	420.42	3,748.58	7,464.98	187,670.96	1,684.59
..	.....	.....	.....	4,995.45	.....	.....	.....	.....	.....	.....
.00	$46,404.73	$56,700.34	$75,355.22	$80,100.00	$80,120.31	$80,435.73	$83,763.89	$312,480.29	$920,397.73	$1,003,667.91
.00	.....	.....	.....	$5,100.00	$5,000.00	.....	.....	.....	$14,000.00	$70,000.00
.00	$20,000.00	$30,000.00	$50,000.00	$50,000.00	50,000.00	$50,000.00	$50,000.00	$50,000.00	450,000.00	450,000.00
..	.....	.....	.....	.....	.....	2,667.18	5,334.36	8,001.54	18,278.18	18,278.18
.00	25,000.00	25,000.00	25,000.00	25,000.00	25,000.00	25,000.00	25,000.00	250,000.00	250,000.00	250,000.00
..	.....	.....	.....	.....	.....	.....	.....	.....	156,300.00	175,000.00
..	1,404.73	1,700.34	355.22	.....	120,31	2,768.55	3,429.53	4,478.75	31,819.55	40,389.73
.00	$46,404.73	$56,700.34	$75,355.22	$80,100.00	$80,120.31	$80,435.73	$83,763.89	$312,480.29	$920,397.73	$1,003,667.91

SCHEDULE "D"

CLARK'S FERRY BRIDGE COMPANY

PROFIT AND LOSS STATEMENTS BEFORE ADJUSTMENT FOR CAPITAL EXPENDITURES

(Note—Italics indicate losses or deficits)

5	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925 to July 31
.00	$133.00	$146.50	$79.50	$75.00	$90.00	$64.50	$111.00	$106.00	$36.50	.....
..	10,180.65	13,555.83	16,791.96	10,976.56	16,561.78	27,059.00	30,891.95	60,010.71	90,203.50	$58,950.58
..	.....	.....	.....	100.00	.....	.....	.....	.....	655.10	51.86
..	$10,313.65	$13,702.33	$16,871.46	$11,151.56	$16,651.78	$27,123.50	$31,002.95	$60,116.71	$90,895.10	$59,002.44
.00	$1,020.00	$1,036.14	$1,186.56	$1,104.72	$1,045.11	$1,334.80	$1,333.47	$8,286.55	$4,946.42	$2,062.97
..	328.00	540.90	125.69	687.70	174.50	3,229.04	806.05	3,430.52	7,412.78	4,457.50
.00	182.84	599.90	72.94	443.93	714.32	3,457.17	1,213.35	4,754.65	.....	.....
..	1,950.02	3,729.78	6,910.99	6,319.42	6,346.84	7,588.82	7,821.92	10,428.59	10,072.64	7,684.02
..	.....	.....	7,600.00	4,771.54	.....	.....	.....	.....	.....	.....
..	.....	.....	.....	.....	.....	.....	.....	.....	1,950.00	.....
..	.....	.....	.....	.....	.....	2,667.18	2,667.18	2,667.18	10,276.64	.....
..	$3,480.86	$5,906.72	$15,896.18	$13,327.31	$8,280.77	$18,277.01	$13,841.97	$29,567.49	$34,658.48	$14,204.49
..	$6,832.79	$7,795.61	$975.28	*$2,175.75*†	$8,371.01	$8,846.49	$17,160.98	$30,549.22	$56,236.62	$44,797.95
.00	1,219.95	1,500.00	2,320,40	3,174.92	3,255.25	3,198.25	3,000.00	3,000.00	8,529.82	16,640.02
..	$5,612.84	$6,295.61	*$1,345.12*†	*$5,350.67*†	$5,115.76	$5,648.24	$14,160.98	$27,549.22	$47,706.80	$28,157.93
..	3,750.00	6,000.00	.....	.....	.....	3,000.00	13,500.00	26,500,00	20,366.00	19,587.75
..	1,862.84	295.61	*1,345.12*†	*5,350.67*†	5,115.76	2,648.24	660.98	1,049.22	27,340.80	8,570.18
..	1,404.73	1,700.34	355.22	*4,995.45**	120.31	2,768.55	3,429.53	4,478.75	31,819.55	40,389.73

tched comment.

SCHEDULE "A", EXHIBIT II.

CLARK'S FERRY BRIDGE COMPANY

ANALYSIS OF EXPENDITURES FOR NEW BRIDGE TO JULY 31, 1925

Construction		
Vang Construction Company	$566,301.19	
New Toll Houses, J. Frank Saussaman	2,000.00	
Superintendent's House	5,673.93	
Moving Houses, North Approach	3,470.82	
Electrical Construction	4,789.56	
Bronze Tablets	1,275.00	
Curb Angles	210.75	
Cinder Fill	141.90	
		$583,863.15
Engineering, Etc.		
Engineer's Fees and Services	$37,921.93	
Survey	10.00	
Analyses	90.00	
		38,021.93
Land and Miscellaneous Charges		
Land Purchased	$2,550.00	
Insurance	480.00	
Pipe, Hose, etc.	1,240.72	
		4,270.72
Cost of Financing		
Discount on Sale of Bonds	58,500.00	
Discount on Sale of Preferred Stock	10,000.00	
Commission on Sale of Preferred Stock	843.00	
Interest Paid During Construction	20,912.11	
Professional Services	2,994.20	
Expenses of Bond Issue	2,185.66	
		95,434.97
Total to July 31, 1925		$721,590.77

NOTE: Subject to attached comment.

RESPONDENT'S EXHIBIT No. 12

AFFIDAVIT OF E. G. PARSLY

State of Pennsylvania,
County of Philadelphia, ss:

Personally appeared before me a Notary Public in and for the County and State aforesaid E. G. Parsly who being duly sworn according to law, deposes and says that he is one of the partners in Parsly Brothers & Company who are engaged in the investment and banking business in Philadelphia, Pennsylvania; that the said firm, together with Battle & Company purchased the entire issue of Four Hundred and Fifty Thousand ($450,000) Dollars of bonds of the Clark's Ferry Bridge Company; and that the actual amount of cash paid to the Clark's Ferry Bridge Company for said bonds was

Principal amount	$391,500
Accrued interest	2,325
Total	$393,825

E. G. PARSLY

Sworn and subscribed before me this 7th day of January A. D. 1926.

BENJAMIN M. KLINE,
Notary Public

My commission expires April 1st, 1927.
(Seal)

RESPONDENT'S EXHIBIT No. 5

Schedule of Tolls Charged by Other Toll Bridges in the United States, as Contained in Report of Joseph K. Costello, General Manager, of Delaware River Bridge Joint Commission, to That Commission, September 19, 1930.

Arthur Kill Bridges:

Goethals Bridge—Between Howland Hook, L. I. and Elizabeth, N. J.

Total length of bridge..... 8,650 feet
Toll—Private passenger automobile and driver..50c
Each additional passenger 5c

Outerbridge Crossing—Between Tottenville, L. I., and Perth Amboy, N. J.

Total length of bridge .....10,140 feet
Toll—Private passenger automobile and driver..50c
Each additional passenger 5c

Bear Mountain Bridge—Crosses Hudson River, Bear Mountain, N. Y.

Total length of bridge ..... 2,257 feet
Toll—Private passenger automobile and driver..80c
Each additional passenger 10c

Ambassador Bridge—Between Detroit, Mich. and Windsor, Ont.

Total length of bridge ..... 9,000 feet
Toll—Private passenger automobile and driver..50c
Each additional passenger 5c

Louisville Bridge—Between Louisville, Ky., and Jeffersonville, Ind.

Total length of bridge ..... 5,750 feet
Toll—Private passenger automobile 35c

Peace Bridge—Between Buffalo, N. Y. and Fort Erie, Canada

Total length of bridge ..... 5,280 feet
Toll—Passenger automobiles and driver:
Up to 112″ wheel base 25c
From 112″ up to 127″ 35c
127″ and over 40c
Each additional passenger 5c

Covington and Cincinnati Bridge—Between Covington, Ky., and Cincinnati, O.

Total length of bridge..... 3,281.9 feet
Toll—Private passenger automobile:
Capacity 3 or less 10c
Capacity 3 or more 15c

Peoples Bridge—Crosses Susquehanna River, Harrisburg, Pa.

Total length of bridge ..... 4,620 feet
Toll—Private passenger automobile..... 5c

Market Street Bridge—Harrisburg, Pa., to East Pennsboro, Pa.

Total length of bridge ..... 4,080 feet
Toll—Private passenger automobile 5c

Hudson River Bridge—Troy, N. Y., to Green Island, N. Y.

Total length of bridge ..... 1,588 feet
Toll—Private passenger automobile
Capacity 3 or less 10c
Capacity 3 or more 13c

Capital City Highway Bridge—Jefferson City, Mo.

Total length of bridge ..... 2,900 feet
Toll—Private passenger automobile and driver
Capacity 3 or less 20c
Capacity 3 or more 25c
Each additional passenger 5c

Mississippi River Bridge—Crosses Mississippi River at Fort Madison, Iowa

Total length of bridge ..... 2,959 feet
Toll—Private passenger automobile 25c

Meridian Highway Bridge—Crosses Missouri River at Yankton, S. Dakota

Total length of bridge ..... 2,993 feet
Toll—Private passenger automobile and driver 50c
Each additional passenger 10c

Lyons and Fulton High Bridge—Clinton, Iowa to Fulton, Ill.

Total length of bridge ..... 2,660 feet
Toll—Private passenger automobile and driver..20c
Each additional passenger 5c

Broadway and Newport Bridge—Newport, Ky.

Total length of bridge ..... 2,966 feet
Toll—Private passenger automobile
Capacity 3 or less 10c
Capacity 3 or more 15c

International Bridge—International Falls, Minn., to Fort Frances, Canada

Total length of bridge ..... 975 feet
Toll—Private passenger automobile 25c

Omaha Bridge—Crosses Missouri River at Omaha, Neb.

Total length of bridge ..... 5,360 feet
Toll—Private passenger automobile and driver
Capacity 3 or less 10c
Capacity 3 or more 15c
Each additional passenger 5c

Kentucky and Indiana Bridge—Louisville, Ky to New Albany, Ind.

Total length of bridge ..... 4,554.4 feet
Toll—Private passenger automobile and driver.25c
Each additional passenger 5c
Maximum charge for passenger automobile and all occupants not to exceed 35c

Carquinez Bridge—Crosses Carquinez Strait at Crockett, Calif.

Total length of bridge ..... 4,282 feet
Toll—Private passenger automobile and driver.60c
Each additional passenger 10c

St. Charles Bridge—Crosses Missouri River at St. Charles, Mo.

Total length of bridge ..... 3,200 feet
Toll—Private passenger automobile and driver.35c
Each additional passenger 5c

Fort Steuben Bridge—Crosses Ohio River at Steubenville, Ohio

Total length of bridge..... 1,585 feet
Toll—Private passenger automobile and driver..25c
Each additional passenger 5c

Missouri River Bridge—Crosses Missouri River at Sioux City, Iowa

Total length of bridge ..... 2,240 feet
Toll—Private passenger automobile and driver 20c
Each additional passenger 5c

Bridgeport Bridge—Wheeling, W. Va. to. Bridgeport, Ohio

Total length of bridge ..... 1,428 feet
Toll—Private passenger automobile..... 5c

Eads Bridge—St. Louis, Mo., to East St. Louis, Ill.

Total length of bridge..... 4,885 feet
Toll—Private passenger automobile and driver
Capacity 2 to 3 .....20c
Capacity 4 to 8 .....35c
Capacity more than 8 .....50c
Each additional passenger 5c

Steubenville Bridge—Crosses Ohio River at East Liverpool, Ohio to W. Va.

Total length of bridge ..... 1,700 feet
Toll—Private passenger automobile and driver..15c
Each additional passenger 5c

Point Pleasant Bridge—Gallipolis, Ohio, to Point Pleasant, W. Va.

Total length of bridge ..... 2,235 feet
Toll—Private passenger automobile and driver 35c
Each additional passenger 5c

Lumberville Bridge—Lumberville, Pa., to Raven Rock, N. J.

Total length of bridge ..... 700 feet
Toll—Private passenger automobile and driver.20c

Dubuque Bridge—Dubuque, Iowa to East Dubuque, Ill.

Total length of bridge ..... 3,200 feet
Toll—Private passenger automobile and driver 25c
Each additional passenger 5c

Steubenville Bridge—Crosses Ohio River from Wheeling, W. Va.

Total length of bridge ..... 1,795 feet
Toll—Private passenger automobile
Capacity 3 or less 15c
Capacity 3 or more 25c

Newell Bridge—Newell, W. Va. to East Liverpool, Ohio.

Total length of bridge ..... 1,600 feet
Toll—Private passenger automobile, 1 or 2 passengers 15c
Each additional passenger 5c

Newport and Cincinnati Bridge—Connects Cincinnati, O. and Newport, Ky.

Total length of bridge ..... 3,500 feet
Toll—Private passenger automobile
Capacity 3 or less 10c
Capacity 3 or more 15c

Lower Arch Bridge—Niagara Falls, N. Y.

Total length of bridge ..... 1,056 feet
Toll—Passenger automobile and driver 25c
Each additional passenger 5c

Tacony-Palmyra Bridge—Palmyra, N. J. to Tacony, Penna.

Total length of bridge ..... 3,680 feet
Toll—Private passenger automobile 35c

BEFORE PUBLIC SERVICE COMMISSION OF PENNSYLVANIA

[fol. 799] STATEMENT OF INCOME AND OPERATING EXPENSES
CLARKS FERRY BRIDGE CO. FOR JULY 1929

Income:

128,016	Automobiles	@	10c	$12,801.60	
2,464	R. & S. Trucks	@	10c	246.40	
1,498	T. & U. "	@	20c	299.60	
1,065	V. & W. "	@	30c	319.50	
381	Y. & Z. "	@	60c	228.60	
32	A. Busses	@	10c	3.20	
59	B. "	@	20c	11.80	
526	C. "	@	30c	157.80	
4	D. "	@	60c	2.40	
5	Horses & Wagons	@		.45	
8	Bicycles	@	5c	.40	
364	Motorcycles	@	5c	18.20	
99	Trailers Misc.			5.96	
42	"	@	30c	12.60	
1	" Monthly			10.00	
1	Road Roller			3.00	
1	Well Drill			2.50	
57	Monthly Autos	@	4.00	228.00	
10	" Trucks	@	4.00	40.00	
1	" "			7.50	
1	" "			10.00	
2	" "	@	20.00	40.00	
	Total Income				14,449.51

Operating Expenses:

Salaries, Collectors, etc.	788.00	
" Bookkeeper	100.00	
" Officers	400.00	
Electric Lights	56.50	
Telephone	4.50	
Printing, etc.	8.20	
Main & Co., Accountants	60.00	
Jitney	5.20	
		1,422.40
		13,027.11

Non-Operating Expenses:

Interest	2,353.34	
Preferred Stock Dividend	3,062.50	
		5,415.84
		7,611.27

NOTE.—The above statement is submitted in response to the request of The Public Service Commission. Further monthly Statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated.

The attention of the Commission is respectfully directed to the fact that the foregoing statement does not represent the income of a normal or average month for the following reasons:

(a) During the month of July, 1929, road repairs on the West Shore and the closing of the West Fairview Bridge have greatly increased the traffic and the revenues of the Company. This condition is only temporary. The re-opening of the roads and the bridge on the West Shore will materially decrease the revenue.

(b) The month of July is the peak of the season for automobile travel, even under normal conditions. The winter months always show a great decline in traffic and in revenue.

[fol. 800] STATEMENT OF INCOME AND OPERATING EXPENSES
CLARKS FERRY BRIDGE CO. FOR AUGUST, 1929

Income:					
140,605	Automobiles	@	10c	$14,060.50	
2,728	R. & S. Trucks	@	10c	272.80	
1,456	T. & U. "	@	20c	291.20	
1,155	V. & W. "	@	30c	346.50	
419	Y. & Z. "	@	60c	251.40	
45	A. Busses	@	10c	4.50	
100	B. "	@	20c	20.00	
635	C. "	@	30c	190.50	
2	D. "	@	60c	1.20	
5	Horses & Wagons	@	10c	.50	
3	Horse & Rider	@	5c	.15	
25	Bicycles	@	5c	1.25	
333	Motorcycles	@	5c	16.65	
63	Trailers	@	30c	18.90	
129	" Misc.	@		10.41	
1	Tractor Engine	@		3.00	
46	Autos, Monthly	@	4.00	184.00	
3	Trucks "	@	4.00	12.00	
2	" "	@	7.50	15.00	
1	" "	@	10.00	10.00	
2	" "	@	20.00	40.00	
	Total Income				15,750.46
	Operating Expenses:				
	Salaries, Collectors, etc.			740.00	
	" Bookkepper			100.00	
	" Officers			400.00	
	Flood Insurance			1,500.00	
	Taxes, Local & State			108.18	
	Fuel & Light			182.31	
	Jitney			5.40	
					3,035.89
					12,714.57
	Non-Operating Expenses:				
	Interest			2,339.17	
					10,375.40

NOTE.—A. The month of August is a peak for Automobile travel.

Tourist traffic was heaviest in history of the Bridge. The above statement is submitted in response to the request of the Public Service Commission. Further monthly Statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated. The attention of the Commission is respectfully directed to the fact that the foregoing statement does not represent the income of a normal or average month.

[fol. 801] STATEMENT OF INCOME AND OPERATING EXPENSES
CLARKS FERRY BRIDGE CO. FOR SEPTEMBER, 1929

Income:				
113,060	Automobiles	@	10c	$11,306.00
2,345	R. & S. Trucks	@	10c	234.50
1,213	T. & U. "	@	20c	242.60
924	V. & W. "	@	30c	277.20
394	Y. & Z "	@	60c	236.40

21	A. Busses	@	10c	2.10	
86	B. "	@	20c	17.20	
525	C. "	@	30c	157.50	
2	D. "	@	60c	1.20	
4	Horse & Wagon	@	10c	.40	
1	"	@		.05	
6	Bicycles	@	5c	.30	
251	Motorcycles	@	5c	12.55	
153	Trailers			26.15	
1	" Monthly	@		10.00	
56	Autos "	@	4.00	224.00	
1	Truck "	@		4.00	
3	" "	@	7.50	22.50	
1	" "	@		10.00	
2	" "	@	20.00	40.00	
	Total Income			12,824.65	
	Operating Expenses:				
Salaries, Collectors, etc.				742.00	
" Bookkeeper				100.00	
" Officers				400.00	
Liability Insurance				165.00	
Income Taxes				2,175.00	
Light				110.62	
Lamps, Hardware, etc.				94.02	
Jitney				4.80	
					3,791.44
	Net Operating				9,033.21
	Non-Operating Expenses:				
Interest				2,460.83	
					6,572.38

NOTE—The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as prompty after the close of each calendar month as the data can be assembled and tabulated.

The attention of the Commission is respectfully directed to the fact that the foregoing statement does not represent the income of a normal or average month.

[fol. 802] STATEMENT OF INCOME AND OPERATING EXPENSES
CLARKS FERRY BRIDGE CO. FOR OCTOBER, 1929

	Income:				
89,776	Automobiles	@	10c	$8,977.60	
2,447	R. & S. Trucks	@	10c	244.70	
1,240	T. & U. "	@	20c	248.00	
933	V. & W. "	@	30c	279.90	
416	Y. & Z. "	@	60c	249.60	
2	A. Busses	@	10c	.20	
92	B. "	@	20c	18.40	
424	C. "	@	30c	127.20	
5	D. "	@	60c	3.00	
41	Horses & Wagons	@		2.20	
188	Motorcycles	@	5c	9.40	
163	Trailers			33.35	
1	" Monthly			10.00	
50	Autos "	@	4.00	200.00	
6	R. & S. Trucks "	@	4.00	24.00	
3	T. & U. " "	@	7.50	22.50	
2	V. & W. " "	@	10.00	20.00	
2	Y. & Z. " "	@	20.00	40.00	
	Total Income				10,510.05

Operating Expenses:		
Salaries, Collectors, etc.	772.75	
" Bookkeeper	100.00	
" Officers	400.00	
Electric Light	111.73	
Water & Telephone	29.50	
Postage & Jitney	10.20	
Refunding Receipts	25.00	
		1,449.18
Net Operating Income		9,060.87
Non-Operating Expenses:		
Interest	1,277.50	
Preferred Stock Dividend	3,062.50	
		4,340.00
Net Operating		$4,720.87

NOTE.—The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated.

[fol. 803] STATEMENT OF INCOME AND OPERATING EXPENSES
CLARKS FERRY BRIDGE CO. FOR NOVEMBER, 1929

Income:				
72,383	Automobiles	@	10c	$7,238.30
1,976	R. & S. Trucks	@	10c	197.60
979	T. & U. "	@	20c	195.80
598	V. & W. "	@	30c	179.40
356	Y. & Z. "	@	60c	213.60
33	A. Busses	@	10c	3.30
42	B. "	@	20c	8.40
328	C. "	@	30c	98.40
None	D. "	@	60c	.....
5	Horse & Wagons	@	10c	.50
116	Motorcycles	@	5c	5.80
114	Trailers	@	.....	20.65
1	" Monthly		.....	10.00
45	Autos "	@	4.00	180.00
4	R. & S. T. "	@	4.00	16.00
2	T. & U. " "	@	7.50	15.00
2	V. & W. " "	@	10.00	20.00
2	Y. & Z. " "	@	20.00	40.00
	Total Income			$8,442.75
	Operating Expenses:			
	Salaries, Collectors			743.34
	" Bookkeeper			100.00
	" Officers			400.00
	Light & Fuel			153.69
	Printing, Postage, etc.			75.50
	Advertising A. A. A.			126.25
	Legal, fees, etc.			105.00
	Jitney			4.60
				1,708.38
	Net Operating Income			$6,734.37
	Non-Operating Expenses:			
	Interest			1,700.00
	Net Operating			$5,034.37

NOTE.—The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar Month as the data can be assembled and tabulated.

Dec. 10, 1929.

[fol. 804] STATEMENT OF INCOME AND OPERATING EXPENSES CLARKS FERRY BRIDGE CO. FOR DECEMBER, 1929

Income:					
59,422	Automobiles	@	10c	$5,942.20	
1,917	R. & S. Trucks	@	"	191.70	
954	T. & U. "	@	20c	190.80	
653	V. & W. "	@	30c	195.90	
408	Y. & Z.	@	60c	244.80	
25	A. Busses	@	10c	2.50	
48	B. "	@	20c	9.60	
333	C. "	@	30c	99.90	
	Horse & Wagons			.85	
39	Motorcycles	@	5c	1.95	
68	Trailers			5.20	
1	" Monthly			10.00	
37	Autos "	@	4.00	148.00	
4	R. & S. "	@	4.00	16.00	
3	T. & U. "	@	7.50	22.50	
2	V. & W. "	@	10.00	20.00	
1	Y. & Z. "			10.00	
.1	Well Drill			2.50	
	Interest			260.43	
	Rents			150.00	
	Total Income				7,534.83
	Operating Expenses:				
Salaries, Collectors, etc				768.34	
"	Bookkeeper			100.00	
"	Officers			400.00	
Cleaning Snow				74.20	
Insurance				25.13	
Taxes Income				2,175.00	
Postage & Telephone				13.20	
Coal & Light				157.10	
Lamps & Hardware				51.14	
Fees Recording				55.20	
Notary Fees				3.50	
Miscellaneous				73.75	
Young Men's C. Assoc				100.00	
					3,996.56
	Net Operating Income				3,538.27
	Non-Operating Expense:				
Interest				2,452.50	
Trustees Services				275.00	
Printing Bonds				240.00	
Federal Revenue				250.00	
Recording Costs				54.00	
Attorney Fees				500.00	
					3,771.50
	Deficit				$233.23

NOTE.—The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar Month as the data can be assembled and tabulated.

[fol. 805] STATEMENT OF INCOME AND OPERATING EXPENSES
CLARKS FERRY BRIDGE CO. FOR JANUARY, 1930

Income:					
42,609	Automobiles	@	10c	$4,260.90	
1,715	A. to K. Trucks	@	10c	171.50	
995	L. to N. "	@	20c	199.00	
673	P. & R. "	@	30c	201.90	
542	S. & U. "	@	60c	325.20	
46	A. Busses	@	10c	4.60	
33	B. "	@	20c	6.60	
394	C. "	@	30c	118.20	
2	D. "	@	60c	1.20	
11	Horse & Wagon			.65	
28	Motorcycles			1.40	
70	Trailers			13.35	
33	Autos Monthly	@	4.00	132.00	
1	A. to K. Tr. "	@	4.00	4.00	
3	L. to N. " "	@	7.50	22.50	
1	P. & R. " "			10.00	
1	S. & U. " "			20.00	
1	Road Roller			3.00	
	Gross Income				5,496.00
	Operating Expenses:				
Salaries, Collectors, etc				733.34	
" Bookkeeper				100.00	
" Officers				400.00	
Cleaning Snow				66.00	
Electric Light				132.40	
Telephone				4.50	
Miscellaneous				13.70	
					1,449.94
	Operating Income				4,046.06
	Non-Operating Expenses:				
Interest				1,997.50	
Preferred Stock Dividend				3,062.50	
					5,060.00
	Deficit				$1,012.94

NOTE.—Sinking Fund for retirement of Bonds is $1,250 monthly.

The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated.

[fol. 806] STATEMENT OF INCOME AND OPERATING EXPENSES
CLARKS FERRY BRIDGE CO. FOR FEBRUARY, 1930

Income:				
44,879	Automobiles	@	10c	$4,487.90
1,688	A. to K. Trucks	@	10c	168.80
991	L. to N "	@	20c	198.20
745	P. to R. "	@	30c	223.50
542	S. & V. "	@	60c	325.20
21	A. Busses	@	10c	2.10
19	B. "	@	20c	3.80
347	C. "	@	30c	104.10
3	D. "	@	60c	1.80
6	Horse & Wagon			.40

40 Motorcyeles @ 5c		2.00	
33 Trailers		4.35	
31 Autos Monthly @ 4.00		124.00	
3 A. to K. " @ 4.00		12.00	
3 L. " N. " @ 7.50		22.50	
2 P. & R. " @ 10.00		20.00	
2 S. & U. " @ 20.00		40.00	
Total Income			5,740.65
Operating Expenses:			
Salaries, Collectors		733.34	
" Bookkeeper		100.00	
" Officers		400.00	
Cleaning Snow		4.00	
Electric Light		123.50	
Stationery		9.96	
Postage, etc		11.00	
Jitney		4.40	
Main & Co., legal work		47.50	
			1,433.70
Operating Income			4,306.95
Non-Operating Expenses:			
Interest		1,953.33	
			1,953.33
Net Income			2,353.62

NOTE.—Sinking Fund for retirement of Bonds, 1,250.00.

The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated

[fol. 807] STATEMENT OF OPERATING EXPENSES AND NET INCOME
CLARKS FERRY BRIDGE CO. FOR MARCH, 1930

Income:			
* * * * * * *			
Operating Expenses:			
Salaries, Collectors		733.34	
" Bookkeepers		100.00	
" Officers		400.00	
Electric Light		120.88	
Fuel		76.60	
Jitney		5.20	
Insurance		2.48	
Taxes	Income	521.90	
	State on Capital Stock	2,125.00	
	" " Bonds	1,107.57	
Legal		110.90	
Donation American Legion		50.00	
Refund Receipts		10.00	
			5,363.87
Operating Income			2,641.43
Non-Operating Expenses:			
Interest			2,006.66
Net Income			$634.77

NOTE.—Sinking Fund for retirement of Bonds $1,250.00.

The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated.

[fol. 808] STATEMENT OF OPERATING EXPENSES AND NET INCOME
CLARKS FERRY BRIDGE CO. FOR APRIL, 1930

Income:

* * * * * * *

Operating Expenses:

Salaries, Collectors & etc	748.94	
" Bookkeeper	100.00	
" Officers	400.00	
Electric Lights	116.10	
Fuel	54.65	
Expenses, Incidentals	84.78	
Jitney	5.00	
Harrisburg Welfare	50.00	
		$1,559.47
Operating Income		7,652.16

Non-Operating Expense:

Preferred Stock Dividend	3,062.50	
Interest	1,883.33	
		4,945.83
Net Income		2,706.33

NOTE.—Sinking Fund for retirement of Bonds $1,250.00.

The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated.

[fol. 809] STATEMENT OF OPERATING EXPENSES AND NET INCOME
CLARKS FERRY BRIDGE CO. FOR MAY, 1930

Income:

* * * * * * *

Operating Expenses:

Salaries Collectors & etc	762.56	
" Bookkeeper	100.00	
" Officers	400.00	
Electric Light	97.76	
Incidentals	107.75	
Jitney	5.20	
		1,473.27
Operating Income		9,406.38

Non-Operating Expense:

2% Tax on Coupons	195.00	
Interest	1,785.00	
		1,980.00
Net Income		7,426.38

NOTE.—Sinking Fund for retirement of Bonds $1,250.00.

The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated.

[fol. 810] STATEMENT OF OPERATING EXPENSES AND NET INCOME
CLARKS FERRY BRIDGE CO. FOR JUNE, 1930

Income:		
* * * * * * * *		
Operating Expense:		
Salaries Collectors & etc.	743.34	
" Bookkeeper	100.00	
" Officers	400.00	
Federal Tax	652.33	
Electric Light	95.44	
Incidentals	70.22	
Jitney	5.00	
		2,066.33
Operating Income		10,193.65
Non-Operating Expense:		
Interest	1,820.84	
Net Income		$8,372.81

NOTE.—Sinking Fund for retirement of Bonds $1,250.00.

The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated.

[fol. 811] STATEMENT OF OPERATING EXPENSES AND NET INCOME
CLARKS FERRY BRIDGE COMPANY FOR JULY, 1930

Total Income		$14,267.85
Operating Expenses:		
Salaries Collectors & etc.	$775.05	
" Bookkeeper	100.00	
" Officers	400.00	
Light	89.63	
Incidentals	109.58	
		1,474.26
Operating Income		12,793.59
Non-Operating Expenses:		
Preferred Stock Dividend	$3,062.50	
Interest	1,707.50	
		4,770.00
Net Income		8,023.59
Sinking Fund for Retirement of Bonds		1,250.00

NOTE.—The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated.

Number Automobiles July 1929	128,017
" " " 1930	124,331
Decline for month	3,686

Detour on West Shore at Kinkora established July 30. This detour added probably one thousand cars in July 1930.

[fol. 812] STATEMENT OF OPERATING EXPENSES AND NET INCOME
CLARKS FERRY BRIDGE COMPANY FOR AUGUST, 1930

Total Income		$17,883.80
Operating Expenses:		
Salaries, Collectors & etc.	$766.70	
" Bookkeeper	100.00	
" Officers	400.00	
Electric Lights	90.14	
Flood Insurance	1,340.00	
Incidentals	29.60	
		2,726.44
Operating Income		15,157.36
Non-Operating Expenses:		
Interest	1,680.84	
Net Income		$13,476.52

NOTE.—Road closed on West Shore from Duncannon to Kinkora during all of August.

We estimate detour increased our receipts $2,000.00.

The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated.

[fol. 813] STATEMENT OF OPERATING EXPENSES AND NET INCOME
CLARKS FERRY BRIDGE COMPANY FOR SEPTEMBER, 1930

Total Income		$14,261.42
Operating Expenses:		
Salaries, Collectors & etc.	$752.12	
" Bookkeeper	100.00	
" Officers	400.00	
Insurance, Liability	165.00	
Taxes, Income	521.90	
" School	34.65	
Electric Light	106.12	
Labor, Bridge	19.00	
Jitney	5.40	
		2,104.19
Operating Income		12,157.23
Non-Operating Expenses:		
Interest		1,750.00
Net Income		10,407.23

NOTE.—Road closed on West Shore during all of September.

We estimate detour increased receipts $1,500 to $1,800.00.

The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated.

[fol. 814] STATEMENT OF OPERATING EXPENSES AND NET INCOME
CLARKS FERRY BRIDGE COMPANY FOR OCTOBER, 1930

Total Income		$12,616.20
Operating Expenses:		
Salaries, Collectors & etc.	$733.34	
" Bookkeeper	100.00	
" Officers	400.00	
Taxes, County	19.68	
Electric Light & Wood	111.80	
Printing & etc.	19.50	
Labor & Jitney	43.00	
		1,427.32
Operating Income		11,188.88
Non-Operating Expenses:		
Interest	$1,676.67	
Preferred Stock Dividend	3,062.50	
		4,739.17
Net Income		$6,449.71

NOTE.—Road closed on West Shore during all of October. We estimate Detour increased receipts $1,500.00 to $2,000.00.

The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated.

[fol. 815] STATEMENT OF OPERATING EXPENSES AND NET INCOME
CLARKS FERRY BRIDGE COMPANY FOR NOVEMBER, 1930

Total Income		$11,035.07
Less Monthly Ticket Refund		16.21
Total Income		11,018.86
Operating Expense:		
Salaries, Collectors & etc.	$733.34	
" Bookkeeper	100.00	
" Officers	400.00	
Tax on Coupons	195.00	
Electric Light	120.74	
Coal	170.25	
Legal Fees	300.00	
Labor & Jitney	7.60	
		2,026.93
Operating Income		8,991.93
Non-Operating Expense:		
Interest		1,675.00
Net Income		$7,316.93

NOTE.—Road closed on West Shore during all of November. We estimate detour increased receipts from $1,500.00 to $1,800.00.

The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated.

[fol. 816] STATEMENT OF OPERATING EXPENSES AND NET INCOME
CLARKS FERRY BRIDGE COMPANY FOR DECEMBER, 1930

Total Income		$8,662.86
Operating Expense:		
Salaries, Collectors & etc.	$766.68	
" Bookkeeper	100.00	
" Officers	400.00	
Labor & Jitney	44.20	
Electric Light	133.82	
Insurance Compensation	18.93	
Taxes, Income	521.90	
State Cap. Stock	2,125.00	
" Loans	967.82	
Electric Lamps, Hdw. etc.	151.58	
Trustees, Paying Coupons & Advert.	154.70	
Incidentals	46.90	
		5,431.53
Operating Income		3,231.33
Non-Operating Expense:		
Interest		1,675.00
Net Income		$1,556.33
Sinking Fund	$1,250.00	

NOTE.—Road closed on West Shore during all of December, diverting all Perry Co. traffic and increasing receipts about $1,500.00 for December.

The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated.

[fol. 817] STATEMENT OF OPERATING EXPENSES AND NET INCOME
CLARKS FERRY BRIDGE COMPANY FOR JANUARY, 1931

Total Income		$7,909.89
Operating Expenses:		
Salaries, Collectors etc.	$733.34	
" Officers	400.00	
" Bookkeeper	100.00	
Insurance	28.00	
Electric Light	151.31	
Water & Telephone	25.90	
Printing	20.00	
Labor & Jitney	11.60	
		1,470.15
Operating Income		6,439.74
Non-Operating Expense:		
Welfare Work	50.00	
Interest	1,676.67	
Preferred Dividend	3,062.50	
		4,789.17
Net Income		1,650.57
Income Tax Reserve for 1930	7,829.83	
Sinking Fund	1,250.00	

NOTE.—Road closed on West Shore and Farm Show Traffic increased receipts about $1,500.00.

The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated.

[fol. 818] STATEMENT OF OPERATING EXPENSES AND NET INCOME
CLARKS FERRY BRIDGE COMPANY FOR FEBRUARY, 1931

Total Income		$6,599.51
Operating Expense:		
Salaries, Collectors	$733.34	
" Officers	400.00	
" Bookkeeper	100.00	
Insurance	1.69	
Light	140.30	
Fuel & Telephone	85.50	
Labor Snow	75.60	
Miscellaneous Expense	23.00	
		1,559.43
Operating Income		5,040.08
Non-Operating Expense:		
Interest		1,671.67
Net Income		3.368.41
Income Tax Reserve for 1930	$7,829.83	
Sinking Fund	1,250.00	

NOTE.—The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated.

[fol. 819] STATEMENT OF INCOME AND OPERATING EXPENSES
CLARKS FERRY BRIDGE CO. FOR MARCH, 1931

Income:					
67,147	Automobiles	@	10c	$6,714.70	
2,771	R. & S. Trucks	@	10c	277.10	
1,727	T. & U. "	@	15c	259.05	
1,505	V. & W. "	@	20c	301.00	
821	Y. & Z. "	@	35c	287.35	
4	Z. "	@	50c	2.00	
1	A. Busses			.10	
9	B. "	@	15c	1.35	
576	C. "	@	25c	144.00	
30	Horses & Wagons			2.60	
86	Motor-cycles	@	5c	4.30	
673	Trailers			80.54	
37	Autos Monthly	@	4.00	148.00	
2	R. & S. "	@	4.00	8.00	
4	T. & U. "	@	6.00	24.00	
2	Y. & Z. "	@	12.50	25.00	
1	Traction Engine			3.00	
	Total Income				$8,282.09
Operating Expense:					
Salaries, Collectors				733.34	
" Officers				400.00	
" Bookkeeper				100.00	
Income Tax				1,950.00	
Electric Light				132.65	
Legal Expense				1,797.00	
Jitney				5.20	
					5,118.19
Operating Income					3,163.90

Non-Operating Expense:					
Interest					1,751.67
Net Income					$1,412.23
Sinking Fund				$1,250.00	

NOTE.—The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated.

[fol. 820] STATEMENT OF INCOME AND OPERATING EXPENSES
CLARKS FERRY BRIDGE CO. FOR APRIL, 1931

Income:					
92,341	Automobiles	@	10c	$9,234.10	
2,959	R. & S. Trucks	@	10c	295.90	
2,076	T. & U. "	@	15c	311.40	
1,764	V. & W. "	@	20c	352.80	
819	Y. & Z. "	@	35c	286.65	
7	A. Busses	@	10c	.70	
15	B. "	@	15c	2.25	
555	C. "	@	25c	138.75	
11	Horses & Wagons			1.00	
211	Motor-cycles			10.55	
897	Trailers			105.32	
37	Autos Monthly	@	4.00	148.00	
3	R. & S. Tr. "	@	4.00	12.00	
6	T. & U. " "	@	6.00	36.00	
4	V. & W. " "	@	7.50	30.00	
2	Y. & Z. " "	@	12.50	25.00	
Total Income					$10,990.62
Operating Expense:					
Salaries, Collectors & etc				743.34	
" Officers				400.00	
" Bookkeeper				100.00	
Telephone				4.50	
Stationery				8.63	
Labor				14.20	
Jitney				5.00	
Harrisburg Welfare				50.00	
Electric Light				132.89	
Coal				52.60	
					1,511.16
Operating Income					9,479.46
Non-Operating Expense:					
Interest				1,675.00	
Preferred Dividend				3,062.50	
					4,737.50
Net Income					4,741.96
Sinking Fund				1,250.00	

Road closed for paving on West Shore, increased tolls $1,500.00.

NOTE.—The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated.

[fol. 821] STATEMENT OF INCOME AND OPERATING EXPENSES
CLARKS FERRY BRIDGE CO. FOR MAY, 1931

Income:						
112,078	Automobiles	@	10c		$11,206.80	
3,206	R. & S. Trucks	@	10c		320.60	
2,020	T. & U. "	@	15c		303.00	
1,805	V. & W. "	@	20c		361.00	
866	Y. & Z. "	@	35c		303.10	
4	Z. Z. "	@	50c		2.00	
9	A. Busses	@	10c		.90	
34	B. "	@	15c		5.10	
576	C. "	@	25c		144.00	
1	H. "				.35	
3	Horse & Rider	@	5c		.15	
602	Motor-cycle	@	5c		30.00	
1,052	Trailers				124.16	
41	Autos Monthly	@	4.00		164.00	
3	R.&S.Tr.Monthly	@	4.00		12.00	
5	T.&U. " "	@	6.00		30.00	
2	Y.&Z. " "	@	12.50		25.00	
	Total Income					13,032.16
	Operating Expense:					
Salaries, Collectors					743.68	
" Bookkeepers					100.00	
" Officers					400.00	
Federal Tax on Coupons					209.25	
Electric Light					114.50	
Main & Co., Accountants					265.00	
Jitney					5.20	
Incidentals					17.00	
						1,854.63
	Operating Income					11,177.53
	Non-Operating Expense:					
Interest					1,699.17	
	Net Income					9,478.36
Sinking Fund					1,250.00	

NOTE.—Road on West Shore was opened to traffic about May 20. The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated.

[fol. 822] STATEMENT OF INCOME AND OPERATING EXPENSES
CLARKS FERRY BRIDGE CO. FOR JUNE, 1931

Income:				
108,908	Automobiles	@	10c	$10,890.80
2,863	R. & S. Trucks	@	10c	286.30
1,823	T. & U. "	@	15c	273.45
1,546	V. & W. "	@	20c	309.20
938	Y. & Z. "	@	35c	328.30
14	A. Busses	@	10c	1.40
19	B. "	@	15c	2.85
721	C. "	@	25c	180.25
1	D. "	@	35c	.35
9	Horses & Wagons			.75
326	Motor-cycles	@	5c	16.30
764	Trailers			99.57

38	Autos Monthly	@ 4.00	152.00	
1	R. & S. Tr. "	@	4.00	
7	T. & U. " "	@ 6.00	42.00	
5	V. & W. " "	@ 7.50	37.50	
2	Y. & Z. " "	@ 12.50	25.00	
1	Z. Z.		.50	
	Total Income			12,650.52
	Operating Expense:			
Salaries, Collectors			737.51	
" Bookkeepers			100.00	
" Officers			400.09	
Electric Lights			109.93	
Insurance			20.00	
Income Tax			1,964.92	
County, School & etc.			36.98	
Advertising Bonds Called			84.05	
Jitney			5.20	
				3,458.59
	Operating Expense			9,191.93
	Non-Operating Expense:			
Interest			1,750.00	
	Net Income			7,441.93
Sinking Fund			1,250.00	
	Note:			
Tolls in June 1930			12,259.98	
" " May 1930			10,879.65	
	Increase		1,380.33	
Tolls in June 1931			12,650.52	
" " May 1931			13,033.16	
	Decrease		382.64	

Opening new road West Shore caused decline of 1,762.97.

NOTE.—The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated.

[fol. 823] STATEMENT OF INCOME AND OPERATING EXPENSES
CLARKS FERRY BRIDGE CO. FOR JULY, 1931

	Income:			
129,865	Automobiles	@ 10c		$12,986.50
2,894	R. R. Trucks	@ 10c		289.40
1,851	T. & U. "	@ 15c		277.65
1,497	V. & W. "	@ 20c		299.40
1,082	Y. & Z. "	@ 35c		378.70
2	Z. Z.	@ 50c		1.00
13	A. Busses	@ 10c		1.30
23	B. "	@ 15c		3.45
783	C. "	@ 25c		195.75
47	D. "	@ 35c		16.45
348	Motor-cycles	@ 5c		17.40
770	Trailers			109.19
42	Autos Monthly	@ 4.00		168.00
2	R. S. T. "	@ 4.00		8.00

7 T. & U. T. "	@ 6.00	42.00	
1 Y. & Z. T. "		12.50	
9 Horses & Wagons		.80	
1 Tractor Engine & Trailer		4.50	
1 " " & Gas Engine		3.75	
1 Well Drill		2.50	
Total Income			$14,818.24
Operating Expenses:			
Salaries, Collectors, etc		758.36	
" Bookkeeper		100.00	
" Officers		400.00	
Electric Light		108.42	
Incidentals		19.00	
Jitney		5.20	
Legal Expense		95.00	
			1,485.98
Operating Expense			13,332.26
Non-Operating Expenses:			
Interest		1,662.50	
Preferred Stock Dividend		3,062.50	
			4,725.00
Net Income			8,607.26
Sinking Fund			1,250.00

NOTE.—The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated.

[fol. 824] STATEMENT OF INCOME AND OPERATING EXPENSES
CLARKS FERRY BRIDGE CO. FOR AUGUST, 1931

Income:				
142,879 Automobiles	@	10c		$14,287.90
3,000 R. & S. Trucks	@	10c		300.00
2,097 T. & U. "	@	15c		314.55
1,615 V. & W. "	@	20c		323.00
1,242 Y. & Z. "	@	35c		434.70
16 Z. Z.		50c		8.00
20 A. Busses	@	10c		2.00
48 B. "	@	15c		7.20
864 C. "	@	25c		216.00
57 D. "	@	35c		19.95
346 Motor-cycles	@	5c		17.30
983 Trailers				142.05
7 Horse & Rider	@	5c		.35
38 Autos Monthly	@	4.00		152.00
3 R. & S. "	@	4.00		12.00
4 T. & U. "	@	6.00		24.00
1 Y. & Z. "				12.50
1 Road Roller				3.00
Total Income				$16,276.50
Operating Expenses:				
Salaries, Collectors, etc			785.02	
" Bookkeeper			100.00	
" Officers			400.00	

Flood Insurance	1,240.00	
Income Tax	6,837.45	
Electric Light	110.23	
Jitney	5.20	
Miscellaneous	15.50	
		9,493.40
Net Operating Income		6,783.10
Non-Operating Expense:		
Interest		1,633.33
Net Income		5,149.77
Sinking Fund		1,250.00
Tolls for August 1930	$17,883.30	
" " " 1931	16,276.50	
Decline for 1931	1,606.80	
Automobiles 1930	156,709	
" 1931	142,879	
" Reduction	13,830	

NOTE.—The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated.

[fol. 825] STATEMENT OF INCOME AND OPERATING EXPENSES
CLARKS FERRY BRIDGE CO. FOR SEPTEMBER, 1931

Income:				
120,715	Automobiles	@	10c	$12,071.50
2,689	R. & S. Trucks	@	10c	268.90
2,036	T. & U. "	@	15c	305.40
1,668	V. & W. "	@	20c	333.60
1,256	Y. & Z. "	@	35c	439.60
63	Z. Z. "	@	50c	31.50
9	A. Busses	@	10c	.90
21	B. "	@	15c	3.15
749	C. "	@	25c	187.25
1	D. "	@	35c	.35
17	Horse and wagon			1.20
464	Motor-cycles	@	5c	23.20
873	Trailers			121.39
39	Autos Monthly	@	4.00	156.00
3	T. & U. "	@	6.00	18.00
1	R. & S. "	@	4.00	4.00
1	Y. & Z. "	@		12.50
97	Double Trailers	@	.35	33.95
	Total Income			$14,012.39
	Operating Expense:			
	Salaries, Collectors & etc			745.84
	" Bookkeeper			100.00
	" Officers			400.00
	Income Tax			1,957.46
	Electric Light			117.95
	Printing & etc			38.00
	Jitney			5.00
				3,364.25
	Net Operating Income			10,648.14

Non-Operating Expenses:

Interest	1,625.00
Sinking Fund	1,250.00

NOTE.—The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated.

[fol. 826] STATEMENT OF INCOME AND OPERATING EXPENSES
CLARKS FERRY BRIDGE CO. FOR OCTOBER, 1931

Income:

99,944	Automobiles	@	10c	$9,994.40	
2,610	R. & S. Trucks	@	10c	261.00	
2,060	T. & U. "	@	15c	309.00	
1,642	V. & W. "	@	20c	328.40	
1,153	Y. & Z. "	@	35c	403.55	
86	Z. Z. "	@	50c	43.00	
1	A. Busses	@	10c	.10	
14	B. "	@	15c	2.10	
721	C. "	@	25c	180.25	
3	D. "	@	35c	1.05	
6	Horses			.50	
171	Motorcycles			8.55	
998	Trailers			159.70	
42	Autos Monthly	@	4.00	168.00	
1	R. & S. Trucks M.	@	4.00	4.00	
3	T. & U. " "	@	6.00	18.00	
1	Y. & Z. " "	@	12.50	12.50	
	Total Income				11,894.10

Operating Expenses:

Salaries, Collectors & etc.	733.34	
" Bookkeeper	100.00	
" Officers	400.00	
Liability Insurance	165.00	
Income Tax	599.17	
State " on Bonds	942.40	
" " " Stock	2,125.00	
Electric Light	133.20	
Coal	148.60	
Water & Telephone	29.50	
Jitney & etc.	13.16	
		5,389.37
Net Operating Income		6,504.73

Non-Operating Expenses:

Interest	1,675.00
Sinking Fund	1,250.00

NOTE.—The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated.

[fol. 827] STATEMENT OF INCOME AND OPERATING EXPENSES
CLARKS FERRY BRIDGE CO. FOR NOVEMBER, 1931

Income:

94,074	Automobiles	@	10c	$9,407.40
2,283	R. & S. Trucks	@	10c	228.30
1,881	T. & U. "	@	15c	282.15

1,293	V. & W. "	@	20c	258.60	
992	Y. & Z. "	@	35c	347.20	
90	Z. Z. "	@	50c	45.00	
2	A. Busses	@	10c	.20	
5	B. "	@	15c	.75	
399	C. "	@	25c	99.75	
2	Horse & Wagons	@	10c	.20	
141	Motorcycles	@	5c	7.05	
766	Trailers			114.01	
46	Autos Monthly	@	4.00	184.00	
1	R. & S. "	@		4.00	
3	T. & U. "	@	6.00	18.00	
1	Y. & Z. "	@		12.50	
	Total Income				11,009.11
	Operating Expenses:				
Salaries, Collectors				733.39	
"	Bookkeeper			100.00	
"	Officers			400.00	
Electric Light				134.45	
Attorney Fees				100.00	
Jitney				4.40	
Miscellaneous				5.13	1,477.37
	Net Operating Income				9,531.74
	Non-Operating Expenses:				
Interest				1,625.00	
Sinking Fund				1,250.00	

NOTE.—The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated.

[fol. 828] STATEMENT OF INCOME AND OPERATING EXPENSES
CLARKS FERRY BRIDGE CO. FOR DECEMBER, 1931

	Income:				
80,431	Automobiles	@	10c	$8,043.10	
2,430	R. & S. Trucks	@	10c	243.00	
1,869	T. & U. "	@	15c	280.35	
1,480	V. & W. "	@	20c	296.00	
1,084	Y. & Z. "	@	35c	379.40	
102	Z. Z. "	@	50c	51.00	
7	A. Busses	@	10c	.70	
8	B. "	@	15c	1.20	
567	C. "	@	25c	141.75	
9	Horse & Wagons	@		.60	
87	Motorcycles			4.35	
1,099	Trailers			173.11	
41	Autos Monthly	@	4.00	164.00	
1	R. & S. "			4.00	
3	T. & U "	@	6.00	18.00	
1	Y. & Z. "			12.50	
	Total Income				9,813.06
	Operating Expenses:				
Salaries, Collectors etc.				781.69	
"	Officers			400.00	
"	Bookkeeper			100.00	
Electric Light & Coal				159.77	
Insurance				19.08	
Income Tax				1,957.45	

2% Bond Tax	195.00	
Treas. Services	67.50	
Advertising	86.90	
Electric Lamps, Hdw. & etc.	157.47	
Jitney	5.20	
		3,930.06
Net Operating Expenses		5,883.00
Non-Operating Expenses:		
Interest	1,625.00	
Sinking Fund	1,250.00	

NOTE.—The above statement is submitted in response to the request of the Public Service Commission. Further monthly statements will be submitted as promptly after the close of each calendar month as the data can be assembled and tabulated.

[fol. 829] IN SUPERIOR COURT OF PENNSYLVANIA, HARRISBURG DISTRICT

No. 8219. Complaint Docket

CLARK'S FERRY BRIDGE COMPANY, Appellant,

vs.

THE PUBLIC SERVICE COMMISSION OF THE COMMONWEALTH OF PENNSYLVANIA

Appeal of Clark's Ferry Bridge Company from the Findings, Determination, and Order of the Public Service Commission

DOCKET ENTRIES

Mar. 1, 1932.—Petition in appeal and assignments of error filed. Eo die exit writ returnable 2nd Monday of March, 1933.

Mar. 1, 1932.—Bond on appeal filed.

And now, Feb. 29, 1932, the foregoing bond and the surety thereon are approved, and it is ordered and directed that the Clark's Ferry Bridge Company on and after March 6, 1932, and until the final determination of its appeal, tender to its patrons an appropriate form of ticket or receipt evidencing the amount of toll paid by each of them to it for the use of its bridge.

The Superior Court of Pennsylvania, by William H. Keller, J.

[fol. 830]

Mar. 1, 1932.—Notice of appeal, etc., filed.
" 3, " —Petition for advancement filed.
" 4, " —Answer of Appellee filed.
" 4, " —Record filed.
" 5, " —Rule granted to show cause, etc., Returnable at Harrisburg, Mar. 14, 1932, at 10 A. M. By the Court. T.
Mar. 8, 1932.—Notice of rule and acceptance of service thereof by Appellee filed.
" " " —Notice of rule and acceptance of service thereof by Appellant filed.
" " " —Answer of Appellant to rule filed.
Mar. 14, 1932.—The time for the argument is fixed for the week beginning Sept. 26, 1932, at Philadelphia. By the Court. T.

And now, Aug. 18, 1932, this case is hereby transferred to the Philadelphia District for argument during the week of Sept. 26, 1932, in accordance with the above order.

Sept. 27, 1932.—Argued at Philadelphia.
Mar. 17, 1933.—Order modified by substituting an annual gross revenue of $85,455.00 instead of $84,125.00, and as thus modified, is affirmed and appeal dismissed. Per Curiam.
Mar. 27, 1933.—Petition of Clark's Ferry Bridge Co. for allowance of appeal to Supreme Court filed.
Mar. 29, 1933.—Petition of Public Service Commission for allowance of appeal filed.
Mar. 29, 1933.—Petition of Public Service Commission for consolidation of appeals filed.

[fol. 831] And now, March 29th, 1933, upon consideration of the within petition, a rule is granted on defendant to show cause why an appeal should not be allowed as prayed for. Returnable April 10th, 1933. Per Curiam. F.

Mar. 30, 1933.—Notice of rule and acceptance of service thereof by Public Service Commission filed.
Mar. 30, 1933.—Notice of rule and acceptance of service thereof by Clark's Ferry Bridge Co. filed.
Mar. 30, 1933—Answer of Public Service Commission filed.

Apr. 11, 1933.—Answer of Clark's Ferry Bridge Co. filed.

And now March 30, 1933, upon considertion of the within petition, a rule is granted on Plaintiff to show cause why an appeal should not be allowed as prayed for. Returnable April 10, 1933. Per Curiam. F.

Mar. 31, 1933.—Notice of rule and acceptance of service thereof by plaintiff filed.

Mar. 31, 1933.—Notice of rule and acceptance of service thereof by Public Service Commission filed.

(Petition of Clark's Ferry Bridge Co.) 1933, April 11.—Appeal refused. Per Curiam. S.

(Petition of Public Service Commission) 1933, April 11.—Appeal refused. Per Curiam. S.

Apr. 13, 1933.—Petition of Clark's Ferry Bridge Co. to stay remission of record filed.

Apr. 17, 1933.—The within petition remitted to Superior Court. Per Curiam. F. (No order made thereon by Superior Court.)

Apr. 20, 1933.—Record remitted to Public Service Commission.

Apr. 22, 1933.—After hearing counsel for the Applicant on the application for stay of execution pending the filing of petition for writ of certiorari, it is hereby ordered that the execution and enforcement of the judgment of the Superior Court of Pennsylvania and the order of the Public [fol. 832] Service Commission of the Commonwealth of Pennsylvania in the above entitled cause be and the same hereby are stayed until the 22nd day of May, 1933, and if on or before said 22nd day of May, 1933, a petition for writ of certiorari shall be filed with this Court in said cause, execution and enforcement of the judgment of the said Superior Court and of the order of the said Commission are hereby stayed until final action on such petition has been taken by this Court;

It is further ordered that the bond in the penal sum of $50,000 now on file in the Superior Court of Pennsylvania remain in full force and effect throughout the duration of this order.

(Signed) Owen J. Roberts, Associate Justice of the Supreme Court of the United States.

Apr. 26, 1933.—Record recalled from Public Service Commission.

Apr. 28, 1933.—Extension of bond filed.

May 1st, 1933.—Approved and ordered filed. By the Court. T.

May 9, 1933.—Stipulation of counsel filed.

[fol. 833] IN SUPERIOR COURT OF PENNSYLVANIA, HARRISBURG DISTRICT

[Title omitted]

BOND ON APPEAL FROM ORDER OF THE PUBLIC SERVICE COMMISSION

Know all men by these presents that we, Clark's Ferry Bridge Company, a corporation of the State of Pennsylvania, as principal, and Fidelity and Deposit Company of Maryland, a corporation of the State of Maryland, as surety, are held and firmly bound unto the Commonwealth of Pennsylvania for the use of all parties damaged by the failure of said Clark's Ferry Bridge Company to comply with the order of the Public Service Commission of the Commonwealth of Pennsylvania appealed from, during the period in which its said appeal shall operate as a supersedeas, in the sum of Fifty Thousand ($50,000) Dollars lawful money of the United States, to be paid to the said Commonwealth, for the use of the party or parties entitled thereto, to which payment, well and truly to be made and done, we do bind ourselves and our successors and assigns and every — of them firmly by these presents.

Sealed with our seals and dated this 29th day of February, A. D. 1932.

[fol. 834] Whereas, Clark's Ferry Bridge Company, a corporation of the State of Pennsylvania, has appealed to the Superior Court of Pennsylvania from the findings, determination and order of The Public Service Commission of the Commonwealth of Pennsylvania in the above stated suit or proceeding;

Now the condition of this obligation is such that if the said Clark's Ferry Bridge Company shall repay, after demand, to all aggrieved parties who may be damaged by its failure to comply with the order appealed from during the period in which its said appeal shall operate as a supersedeas, any excess over the rate or charge fixed by

The Public Service Commission of the Commonwealth of Pennsylvania which shall be received by said Clark's Ferry Bridge Company after the making of such order by the Commission, then this obligation to be void; otherwise to be and remain in full force and virtue.

Clark's Ferry Bridge Company, by Christian W. Lynch, President. Attest: John Y. Wills, Secretary. (Seal.) Fidelity and Deposit Company of Maryland, by G. L. Culmerry, Attorney-in-fact. (Seal.)

[fol. 835] Order

And now, Feb. 29, 1932, the foregoing bond and the surety thereon are approved, and it is ordered and directed that the Clark's Ferry Bridge Company on and after March 6, 1932, and until the final determination of its appeal, tender to its patrons an appropriate form of ticket or receipt evidencing the amount of toll paid by each of them to it for the use of its bridge.

The Superior Court of Pennsylvania, by William H. Keller, J.

[fol. 836] Writ—Filed March 4, 1932

The Superior Court of Pennsylvania,
Sitting at Harrisburg, ss:

The Commonwealth of Pennsylvania, to the Members of the Public Service Commission of the Commonwealth of Pennsylvania, Greeting:

We, being willing for certain causes to be certified of the matter of the appeal of Clark's Ferry Bridge Company from the order of your said Commission to Complaint Docket, No. 8219, before you, or some of you, depending, do command you that the record and proceedings aforesaid, with all things touching the same, before the Judges of our Superior Court of Pennsylvania, at a Superior Court to be holden at Harrisburg the second Monday of next March (1933), so full and entire as in our Court before you they remain, you certify and send, together with this writ, that we may further cause to be done thereupon that which of right and according to the laws of the said State ought.

Witness the Honorable Frank M. Trexler, Doctor of Laws, President Judge of our said Superior Court, at Har-

risburg, the 1st day of March, in the year of our Lord one thousand nine hundred and thirty-two.

Homer Hummel Strickler, Deputy Prothonotary.
(Seal of Superior Court.)

[fol. 837] To the Honorable the Judges of the Superior Court of the Commonwealth of Pennsylvania, sitting at Harrisburg:

The record and process, and all things touching the same, so full and entire as before us they remain, we certify and send, as within we are commanded.

The Public Service Commission of the Commonwealth of Pennsylvania, by Louis Tevell, Secretary. (Seal of Public Service Commission.)

(Endorsement:) No. 2, March Term, 1933. Superior Court. Clark's Ferry Bridge Company, appellant, vs. The Public Service Commission of the Commonwealth of Pennsylvania. Certiorari to the Public Service Commission of the Commonwealth of Pennsylvania. Returnable the second Monday of March, 1933. Rule on the appellee, to appear and plead on the return-day of the writ. Homer Hummel Strickler, Deputy Prothonotary. Filed in Superior Court, Harrisburg District, Mar. 4, 1932. Docketed Appeal Docket Mar. 4, 1932. Entry No. 1. Costs, $12, pd. by Messrs. Snyder, Miller, Hull & Hull.

[fol. 838] In Superior Court of Pennsylvania

No. 7. No. 7

No. 2, March Term, 1933

Clark's Ferry Bridge Company, Appellant,

v.

The Public Service Commission of the Commonwealth of Pennsylvania

Appeal from the Order of the Public Service Commission of the Commonwealth of Pennsylvania in Complaint Docket No. 8219

Opinion—Filed March 17, 1933

Per Curiam:

Clark's Ferry Bridge Company, the appellant herein, was the respondent in a certain inquiry and investigation

instituted against it by The Public Service Commission of the Commonwealth of Pennsylvania, upon its own motion, on January 14, 1930.

The subject matter of the investigation was the reasonableness of the toll rates appellant was then charging for passage over its concrete bridge spanning the Susquehanna River, from southeast to northwest, at a point about fourteen miles north of Harrisburg and several hundred yards north of the confluence of the Juniata and Susquehanna Rivers. The rates challenged were those fixed by appellant in its tariff P. S. C. Pa. No. 4, effective July 1, 1929; included therein was a rate of ten cents for an ordinary passenger automobile. During the progress of the inquiry, appellant filed a new tariff, P. S. C. Pa. No. 5, effective November 14, 1930, in which it reduced the rates on the higher classifications of motor busses and trucks from sixty cents to thirty-five and fifty cents respectively, but retained the ten-cent rate for automobiles.

[fol. 839] The investigation terminated on February 2, 1932, in a report and order by the commission, finding that the rates contained in the then existing tariff P. S. C. Pa. 5 "are unreasonable, and will be for the future, and that a tariff should be filed calculated to produce a revenue of $84,125 per year." Appellant was accordingly ordered to file, post, and publish, a tariff containing the following tentative rates": (1) A rate of eight cent cash toll for all ordinary passenger automobiles and wagons theretofore paying ten cents; (2) a ticket, without time limit, salable at the rate of two for fifteen cents for all such automobiles and wagons; (3) a twenty-trip ticket, non-transferable as between vehicles, good any time within thirty days from date of issue and salable for one dollar for all such automobiles and wagons; and (4) for all other types of vehicles the rates to remain as provided in tariff P. S. C. Pa. No. 5.

The appeal now before us was taken by the bridge company from the above finding and order of the commission.

As this was the third proceeding in which the rates of appellant have been under investigation before the commission—the first having been conducted in 1926, and the second in 1929—and as there is a close relation between the result of the proceedings in 1926 and the present inquiry, reference to the previous investigations is neces-

sary. The bridge is comparatively new, having been completed May 30, 1925, under a contract awarded June 10, 1924. Appellant's tariff P. S. C. Pa. No. 2 became effective May 30, 1925, and contained a rate of twenty-five cents for automobiles of more than two passenger capacity. The new bridge was constructed near the site of, and to replace, a covered wooden bridge, acquired April 7, 1915, at a public auction in Philadelphia, in behalf of four individuals who incorporated the present Clark's Ferry Bridge Company. By 1924, the increase in the volume and weight of traffic rendered the wooden bridge obsolete and appellant constructed the new bridge, consisting of fifteen concrete [fol. 840] arches, open spandrel type of construction, with twenty-foot wide clear roadway and a four-foot wide sidewalk on the upstream side. It has a total length of 2,075 feet, face to face of abutments, and an extended approach at each end, and is located about fifty-four feet (center to center) downstream from the old bridge.

The twenty-five cent rate included in tariff P. S. C. Pa. No. 2 had been in effect since 1915. On August 11, 1925, George A. Herring, et al., filed a complaint (Complaint Docket 6611) alleging that the rates then in effect were unreasonable. Hearings were conducted by the commission upon this complaint for the purpose of enabling it to determine the then fair value of appellant's property for rate making purposes. This proceeding resulted in a report and order, dated June 8, 1926, in which the commission found that the fair value of the property, as of that date, was $767,800, and that appellant was entitled to receive, for the use of its property devoted to the public service, a gross annual revenue of $85,905, thus ascertained:

7% Return on $767,800	$53,746
Annual operating expenses and taxes	23,150
Annual depreciation allowance	7,678
Amortization of bond discount	1,331
Total allowable gross revenue	$85,905

As the rates in tariff No. 2 were producing a gross revenue in excess of the above amount, the commission determined that the rates then in effect were unreasonable, and ordered appellant to file a new tariff to become effective July 1,

1926, containing rates designed to yield an annual gross revenue not in excess of $85,905; it also expressed the opinion that the public interest demanded that the rate for private automobiles, regardless of seating capacity, should not exceed fifteen cents.

[fol. 841] From this report and order appellant appealed to this court on June 22, 1926, and gave bond, in accordance with section 19 of Art. VI of the Public Service Company Law of July 26, 1913, P. L. 1374, conditioned for the repayment, to all parties aggrieved, of any excess above the rate fixed by the commission, in the event that the order of the commission should be finally affirmed. This appeal was argued before us, at Philadelphia, in November, 1926, and a reargument was directed to be had, at Harrisburg, in March, 1927, "with special reference to depreciation." Before the time fixed for the reargument, appellant, by reason of increased traffic, decided to withdraw the pending appeal. Accordingly, on February 26, 1927, it filed a new tariff, P. S. C. Pa. No. 3, retroactive to July 1, 1926, (the date specified by the commission in the order appealed from), in which a fifteen-cent rate for automobiles with a seating capacity of seven or less, was included.

During the period between July 1, 1926, and February 26, 1927, appellant gave persons crossing its bridge in motor vehicles receipts for the excess tolls collected during that period. It is stated by the commission, in the course of its report in the present proceeding, that the receipts issued aggregated $32,821, but the total of those presented for redemption was only $8,510, leaving a difference of $24,311 of excess tolls in the treasury of appellant.

The next complaint was filed by the Commercial and Industrial League of Harrisburg on April 22, 1929, at Complaint Docket No. 8002. This complaint was inartificially drawn and was directed rather against certain alleged violations by appellant of the order of June 8, 1926, than against the rates, nor did the evidence offered in support of the complaint furnish a sufficient basis for the determination of a reasonable rate.

During the pendency of this second complaint, appellant [fol. 842] on June 1, 1929, filed a new tariff, P. S. C. Pa. No. 4, effective July 1, 1929, in which it reduced the rate for ordinary passenger automobiles to ten cents; this was the tariff in effect on January 14, 1930, the date upon which the

commission made its interim report on the complaint of the Commercial and Industrial League and instituted the present inquiry, upon its own motion, at Complaint Docket No. 8219.

Appellant filed its answer to the commission's complaint and averred therein that its rates were fair, just and reasonable.

Hearings were conducted before the commission between March 12, 1930, and February 26, 1931. In support of its complaint, the commission offered its report and order in the prior proceeding of 1926, the annual reports of appellant for 1926, 1927, and 1928, and, through James E. Keane, one of its accountants, a report of an examination of appellant's books and records, designated as "Complainant's Exhibit No. 1." Appellant, through James W. White and Paul B. Johnson, of the American Appraisal Company, placed in evidence a reproduction cost estimate of its property, dated September 1, 1929, and identified as "Respondent's Exhibit No. 1"; this was followed by the placing in evidence by the commission of a similar estimate, prepared by Lynn B. Curry, one of its engineers, referred to as "Complainant's Exhibit No. 3."

From a comparison and analysis of these estimates, we may readily ascertain the differences between the parties. Appellant's contention was that the then fair value of its property for rate making purposes was $1,029,297, as shown by its reproduction cost estimate, less accrued depreciation. The estimate of the commission's engineer of the reproduction cost of appellant's property, less the accrued depreciation thereon, was $741,871. The commission determined that the fair value for rate making purposes, as of February 2, 1932, was still $767,800, and fixed the allowable annual gross revenue as follows:

[fol. 843] "Fair return [7% on $767,800] $53,746
Annual expenses 22,700
Annual depreciation 7,678

Total ..... $84,124"

Appellant contended the rate of return should be nine per cent and that the annual allowable gross revenue should be thus ascertained:

Fair return [9% on $1,029,297]	$92,636
Operating expenses	34,928
Annual depreciation	21,210
Total	$148,774

Each estimate of reproduction cost was set up under the same general divisions and headings. Under the general division, "Tangible Costs," there are two sub-divisions: (a) "Direct Construction Costs," and (b) "Indirect Construction Costs"; under the former are listed the respective appraisements of the physical property of appellant, divided into appropriate classifications and with twenty numbered items under the classification, "Bridge Structure." Under the heading, "Indirect Construction Costs," items for "Engineering and Supervision," "Administrative, Legal and Incidental," expenses are listed, as well as one for "Interest During Construction." The engineers of appellant included under the general division, "Intangible Costs," the following items: "Promotion and Preliminary Organization," "Organization and Incorporation," "Cost of Financing," and "Interest on Intangibles," together with an estimated amount under each heading; the engineer for the commission grouped "Promotion and Preliminary Organization" and "Organization and Incorporation" together, including a single amount for these items, and did not include anything for "Interest on Intangibles." From each estimate an amount is deducted for "Accrued Depreciation." The engineer for the commission, however, de-
[fol. 844] ducted more than two and one-half times as much for this item as did the engineers for appellant. There are two other items, aggregating $157,000, included in appellant's estimate but entirely excluded by the engineer for the commission; these items are $57,000 for "Attached Business Value" and $100,000 for "Value of Location." Appellant's total estimate of reproduction cost, less accrued depreciation, is $1,032,644, but it conceded that $3,347, included for certain freight items, should be deducted, thereby making its final estimate $1,029,297, as hereinbefore stated.

With this general description of the respective contentions of the parties and of the scope and character of the evidence in mind, we are prepared to consider the contention of the able and experienced counsel for appellant that

the commission treated its findings in the investigation of 1926 as res judicata of the issues arising under the present complaint and answer. It is true that the commission fixed the fair value of appellant's property, as of the date of the order now appealed from (February 2, 1932), at the same amount as that arrived at in 1926, and it is also true that the allowable gross annual revenue now prescribed is slightly lower than that allowed in the previous proceeding.

We, however, do not understand the report of the commission in this proceeding to mean that it treated its findings in 1926 as necessarily conclusive upon the issues raised by appellant in the present inquiry. Counsel for appellant point to a sentence in the present report in which the commission, after referring to its report and order in 1926 and to the fact that the appeal taken by appellant from that order operated as a supersedeas until the withdrawal of the appeal on March 1, 1927, say, "The commission's finding of value thereupon [i. e. when the appeal was withdrawn] became conclusive upon the company and tariff No. 3 was filed, prescribing, among others, a fifteen-cent rate for ordinary passenger automobiles and commonly [fol. 845] known as the fifteen-cent tariff." That statement obviously refers to the effect of the withdrawal by appellant of its appeal from the order of June 8, 1926, and the filing of the tariff therein prescribed; it correctly describes the situation as it existed immediately after the withdrawal of the appeal. When the subsequent complaints were filed, the commission evidently did not consider its previous findings as barring appellant from raising the question of the fair value of its property in 1930 and the proper allowances to be made for operating expenses and depreciation, but instituted an investigation, and, as already stated, admitted in evidence appellant's reproduction cost estimate and its supporting testimony, and put in evidence the reproduction cost estimate of one of its engineering staff, and the report of the result of an examination of appellant's books and records.

Because of the comparatively recent construction of the bridge, evidence of its actual cost was readily available at both inquiries. The evidence in each proceeding showed the bridge was built under a contract awarded after competitive bidding. Appellant contended, and showed, the contractor lost money, but the commission replied the loss

was due to unusual flood conditions in September, 1924, which entailed a loss to the contractor through delay and destruction of equipment.

Referring to the difference in the character of the evidence introduced at the respective hearings, the commission said:

"A significant factor in the present consideration is that all the new material submitted in this proceeding is a matter of judgment and estimate on the part of appraisal engineers, whereas the finding in 1926 was made almost in its entirety upon actual cost figures as shown by the books of the company and sustained by the testimony of the engineer in charge of the bridge construction. In the absence of evidence that these figures were either abnormal at that time or have become obsolete by reason of changes in price [fol. 846] levels or construction conditions, they should carry a very material weight in forming a decision as to the reproduction cost and value of this property at the present time. * * * While the technical burden of proof is not upon it, it would seem that the company in attempting to satisfy the commission that the prior actual cost of the bridge and the findings of the commission as of that time are materially lower than the present value of the bridge, has a substantial burden upon it to satisfy that tribunal of the merit of its contentions."

In stating its conclusion as to fair value the commission said:

"As has already been noted the valuation of the property in 1926 was made chiefly on actual cost figures adequately supported by testimony of engineers. The present claim of increased value is based on non-competitive estimates of appraisers whose business it is to make such estimates. In the face of their figures the evidence is that construction costs and methods have not increased in the interval. Any necessity of reconciling their estimate with the actual prior figures is disclaimed by these witnesses. In the interval since the prior valuation, the commission could not assume, without investigation, that capital investment and operating cost had not changed so as to affect the level of

reasonable rates. We have now made such a study of the property. Having made a complete valuation of this property in 1926 and having ascertained that cost conditions have not changed materially since that time, the commission is of the opinion that it is not required to reopen the entire question of valuation merely because the company concerned desires it. Nor is there anything in the evidence adduced which is persuasive that in this particular case justice requires a reopening of the prior valuation. Upon a complete examination of the entire record in both proceedings, the commission is of the opinion and finds that the fair value of the property of the Clark's Ferry Bridge Company is still $767,800 as of this time."

[fol. 847] In our opinion, these excerpts from the report of the commission demonstrate it took the position in the present proceeding that, although the technical burden of proof was not upon appellant, yet, in view of the history of the 1926 inquiry, appellant did have the burden of supporting its contention that conditions had so changed between 1926 and 1931 that its present reproduction cost estimate was a better index of fair value than was proof of the actual original cost of its property. As its reproduction estimate was approximately 35% higher than original cost, appellant had a rather heavy burden, but was afforded every opportunity to support its contention by evidence.

The evidence shows that in 1924, when the contract for the construction of the bridge was awarded, construction prices were reported as being 215% of the 1913 level; that in September, 1929, when appellant's reproduction cost estimate was made, they were 208% of the 1913 level; and that during the last three months of 1930 they fell to about 198%. In brief, we have the situation. The commission made a finding of value in June, 1926, from which appellant appealed but subsequently abandoned its appeal; the finding thereupon became conclusive for a reasonable period of time. Probably no general rule could be formulated with relation to just when it may became the duty of the commission to make a new valuation of the property of a utility. Under such precedents as City of Phila. v. Public Ser. Com. 83 Pa. Superior Ct. 8; Same v. Same, 84 Pa. Superior Ct. 135; Kittanning Tel. Co. v. Pub. Ser. Com. 78 Pa. Superior Ct. 436; City of Erie v. Pub. Ser. Com. 103 Pa. Superior Ct.

59; and New Street Bridge Co. v. Pub. Ser. Com., 271 Pa. 19, it may be said that when conditions have changed materially, or price levels have fallen or risen to a marked degree, since a prior investigation, the commission should again go into the question of value. The important question here was whether appellant's evidence showed such changes in conditions or price levels as to make it the duty [fol. 848] of the commission to revalue the property.

In arguing that the commission ignored the settled proposition of law that a public service company is entitled to earn a fair return upon the present fair value of its property, regardless of what the original cost of that property may have been, counsel for appellant say in their brief that the "difference [for which they contend] does not arise out of a change in price levels; but from the fact that the company at the time of the construction of the bridge obtained its property for less than cost, or fair value." The same contention was made in the former proceeding; the burden of appellant's present complaint seems to be, not that conditions or price levels have so changed as to require a new valuation, but that the original valuation by the commission was too low. This argument seems to ignore the legal effect of the withdrawal by appellant of its appeal from that valuation.

Having reached the conclusion that appellant's evidence did not show such changes in conditions or price levels as would entitle it to have the previous adjudication of fair value opened and revised, there was no occasion for the commission to make specific findings as to the reproduction cost of the items of physical property concerning which the engineers disagreed, or with reference to controverted overheads and intangible costs. It did, however, discuss these items in its report and indicate its reasons for holding that appellant's evidence relative thereto did not justify opening the prior finding. The commission also stated the factors considered by it in fixing its present allowances for operating expenses (including federal income taxes) and for annual depreciation, together with its reasons for rejecting appellant's contentions with respect to these annual allowances.

In compliance with the legislative mandate of the amendment of June 12, 1931, P. L. 530, that, in an appeal of this character, we shall consider the record and "on [our]

[fol. 849] own independent judgment * * * determine whether or not the findings made and the valuation and rates fixed by the commission are reasonable and proper," we have examined into the main controversies between the parties.

The first question demanding consideration, relates to the respective estimates of the reproduction cost, new, of the physical property, which estimates are set out in each exhibit under the heading "Direct Construction Costs." The total of these costs as contended for by the engineers of appellant, is $718,504, and the amount conceded by the engineer for the commission is $664,774.

An inspection of the estimates discloses substantial agreement as to approximately three hundred thousand dollars worth of physical property and that the difference of $53,730 in the totals is due to material differences in four of the twenty-eight items arranged under the heading, "Direct Construction Costs."

Three of the items referred to are sub-divisions under "Bridge Structure"; the fourth is entitled "Earth Fill," and relates to the fills of the old bridge which were held to be useful in the new structure.

The character of the items and the estimates of the respective engineers may be thus indicated:

Item	Appellant's engineers	Commission's engineer
10. 1:2:4 Concrete Arch Rings, Walls, etc.....	$267,312	$246,896
17. Reinforcing Steel Bars in Concrete.....	68,778	49,667
20. Coffer-Dams	51,681	42,000
Earth Fill.....	16,800	12,000
Totals	404,571	350,563

The amount of concrete involved in Item 10 (the largest single item in the inventory) was 9,496 cubic yards and the difference in the estimates $20,416; appellant's engineers [fol. 850] used a unit price of $28.15 and the commission's engineer $26.

An analysis of the testimony indicates that appellant's engineers included an item of $2 for "labor for building forms," but the commission's engineer made no separate allowance for this item. Our independent judgment is that the evidence indicates $26 as a proper and reasonable unit price to be used in making a reproduction cost estimate on

this item. The bid of the contractor who built the bridge was $24 per cubic yard.

Under Item 17, the number of pounds of reinforcing steel bars used was 1,079,718; appellant's engineers used a unit price of .0637 cents and the commission's engineer .046 cents; resulting in a difference of $19,111. Expressed in tons, the unit prices are $127.16 and $91.47.

Appellant concedes that its unit price should be reduced to .0606 by deducting estimated freight charges, above mentioned, aggregating $3,347. We are not convinced that the estimate of the commission's engineer is unreasonably low on this item.

Item 20, coffer-dams, in which there is a difference of $9,681, involves problems upon which it is difficult to arrive at satisfactory conclusion. As to the tangible costs under this item, the engineers agree they should be estimated at approximately $26,500, but they disagree materially about the indirect charges and overheads. The commission's engineer stated that "the item of coffer-dams and taking care of the water * * * is the most indefinite one to detail in the whole valuation." Our judgment is that his estimate on this item should be increased to $50,000.

As the present bridge is downstream from the site of the former, it was possible for appellant to use, as a protection to the new structure, the two abutments, retaining walls and approach fills, which formed parts of the [fol. 851] old one. The dfference here relates to the approach fills, containing 8,000 cubic yards, and amounts to $4,800.

With reference to this subject the commission said in its report:

"The engineer has included both the old fills and the new fills constructed when the new bridge was built in 1924 and 1925 at the same unit costs. Although this unit cost is conceded to be unusual and higher than was estimated when the bridge was built, there is substantial evidence that it is not an improbable cost for such work in this vicinity. The lower cost adopted by the commission's engineer for the old fill alone is based, however, upon the fact that it is an old fill adapted to its present uses and is not intended to be a cost of placing new fill. The commission is of the opinion that if the fill is to be regarded

in its entirety as used and useful property, it should be included at a price reflecting its second hand nature, as was done in the prior proceeding."

We do not disagree with these conclusions relative to this item. The company's engineer, at the first hearing, fixed the value of the old fill at $12,000, the figure used by the commission's engineer.

The net result of our conclusions from the evidence introduced for the purpose of showing the direct reproduction cost, new, of appellant's physical property is that the estimate of the commission's engineer should be increased $8,000 on Item 20. In our opinion, the total of "Direct Construction Costs" should be fixed at $672,774.

The direct reproduction cost of the physical property of a public utility is, however, only one step in the ascertainment of its total depreciated reproduction cost, and that cost is merely one of the indices of fair value.

[fol. 852] Therefore, our conclusions with respect to the direct cost of reproducing appellant's physical property can have but slight bearing upon the main question, whether the evidence, as a whole, made it the duty of the commisison to reopen its former valuation.

The soundness of the commission's position is best seen when we compare the indirect construction and intangible costs claimed by the company's engineers as entering into the reproduction value of the bridge in September 1929 with the corresponding costs actually expended by the company in its erection in 1924-5. As has already been pointed out the commission's duty was to fix the fair value of the bridge at or about the time it made its order, on which a fair and reasonable return to the company could be calculated, which in connection with operating expenses and annual depreciation would represent the gross return which the company was entitled to receive from the public by way of tolls. Our Public Service Company Law requires the commission, in ascertaining and determining the fair value of a public service company's property, to take into consideration, inter alia, the original cost of construction, particularly with reference to the amount expended in the existing and useful permanent improvements, and the reproduction costs of the property based upon the fair average price of materials, property and labor (Art. V,

Sec. 19); and the Supreme Court of the United States has ruled that the present reproduction cost, less depreciation, must be considered in arriving at fair value; although it does not have to be accepted as the measure of such value: Georgia Ry. & Power Co. v. Railroad Commission, 262 U. S. 625; City of Phila. v. P. S. C., 84 Pa. Superior Ct. 135, 150. The peculiar circumstances of this case, however, bring it more nearly within the pronouncement of the Supreme Court of the United States in McCardle v. [fol. 853] Indianapolis Water Co., 272 U. S. 400, that "the reasonable cost of a [public utility], well planned and efficient for the public service [in that case a waterworks sytem] is good evidence of its value at the time of construction. And such actual cost will continue fairly well to measure the amount to be attributed to the physical elements of the property so long as there is no change in the level of applicable prices" (p. 411).

The utility property under consideration in this case is not a complicated system which has taken years to construct and enlarge, like a water works, or gas works, or electric light plant, or street railway system. It is one structure, a reinforced concrete bridge, built as it now is, without additions or improvements. It took a year to build it and it was completed in May, 1925, only six years before the commission's engineer made his reconstruction estimates. The wooden bridge which it replaced was not abandoned or discontinued until the new bridge was completed. We have a right to consider the history of the bridge and the facts in connection with its construction in passing on the fair value of the property. As we have already stated, the trend in prices has been downward rather than upward from 1924-5, when the bridge was built, to 1931-2, when the commission determined its present fair value. Certainly, in the absence of proof that the prices paid for the construction of the bridge were abnormally low there is no reason why in the short period of six years after its completion, with the tendency of prices for both material and labor being downward, there should be a radical increase in the fair value of the bridge for rate-making purposes. We have already examined the tangible costs of a reconstruction estimate with the results above mentioned. As to the intangible costs the commission in making up its determination of fair value used the

following figures submitted by the company as their actual cost, viz., engineering $39,272, miscellaneous $4,271, inter- [fol. 854] est paid during construction $20,912, but instead of cost of financing claimed, $74,523, allowed $37,523, as the real cost of financing, and also allowed $27,000 bond discount to be amortized out of earnings over the life of the bonds, fifteen years, making an annual allowance of $1,331, but disallowed $10,000 claimed as cost of financing the preferred stock. The commission also allowed incorporation expense of $819 actually paid, and $21,950 expense for removing piers of the old bridge from the bed of the river. These piers have only recently been removed.

The company's engineers, at the hearing, proceeding as if it were an entirely new proposition, without a history, estimated the following "Intangible Costs":

Promotion and preliminary	$10,125	
Organization and incorporation	10,125	
Financing	58,090	
Interest on intangibles	3,980	
		82,320

and in addition estimated the following "Indirect Construction Costs":

Engineering and supervision	$43,027	
Administrative, legal and incidental	9,930	
Interest during construction	38,145	
		91,102
making a total of		$173,422
for what the commission had allowed, based on actual expenditures		$129,797

With these figures may be compared those prepared by the engineer of the commission in estimating theoretically the reproduction cost new of the bridge, which were considered, but not adopted, by the commission:

Engineering	$43,000
[fol. 855] Promotion and organization	8,000
Administrative, legal and general exp.	8,000
Interest during construction	22,000
Cost of financing	37,500
Total	$118,500

We are of opinion that the actual expenditures made by the company for these intangible or indirect construction costs when the bridge was built six years before, more nearly represent their real value than the estimated percentages calculated by engineers living at a distance and based on a theoretical construction by a new corporation without any history or background: Wabash Valley Elec. Co. v. Young, et al., — U. S. —, decided January 9, 1933. We are of opinion, however, that as bond discount of $27,000 was actually paid by the company it is entitled to its annual amortization allowance of $1,331 for the life of the bonds, even though the bond issue has since been refunded and reduced to $269,500.

As before stated, the company contended that the actual cost of constructing the bridge did not represent its value because the contractor lost money on the job, and therefore that it obtained the bridge for less than its fair value. The company is entitled to have its schedule of rates based on the fair value of the bridge and if that value is greater than the amount paid the contractor, it is entitled to a fair return on the excess over actual cost. But the fact that the contractor lost money on the job is not proof that the value of the bridge exceeded the amount paid the contractor by the amount of his loss, which was calculated as follows:

Loss on labor and materials	$61,140
Overhead, depreciation and plant charge	82,000
Fair profit to contractor	70,000
	$213,140

[fol. 856] On the contrary, as pointed out by the commission in its first report, when the same claim was made, the loss may have been due to bad judgment on the part of the contractor. A sudden rise in the Susquehanna River during the course of the work was responsible for the loss; without it there would have been a fair profit. Twenty thousand dollars additional spent on the coffer-dam construction above the $30,000 spent by the contractor would probably have obviated the loss. Hence the utmost that the company could ask to be added to the contractor's figures would be, not the loss to the structure and the contractor's equipment and profits cause by the flood, but the cost of the enlarged coffer-dam construction which would

have prevented the loss. We have increased the cofferdam expense to cover this amount.

The fair value of the reconstructed house which is used for living quarters of the superintendent and incidentally as an office, is to be measured by its fair market value, not by its reconstruction cost. It is a dwelling house, brick and stucco, with no special features distinguishing it from an ordinary dwelling. It differs from a distinctive utility structure, that has no other use or purpose. The fair market value in our opinion—especially in view of the decline in real estate values—is better measured by the value fixed by the commission than by the reconstruction cost figures of the company's engineers.

As stated, the company presented two large items of alleged "fair value" which the commission disallowed in toto:

"Attached business value	$57,000
Value of location	100,000"

The explanation of the item "attached business value" as given in the company's engineers' report is "If another bridge should be constructed beginning at the date of this appraisal sixteen months would elapse before such bridge could begin to earn. The existing bridge during that period, if limited to 8 per cent. return per annum on the [fol. 857] cost of reproduction, would have earned $95,138, or if the return were fixed at 8 per cent on the cost of reproduction and other values here mentioned, the earnings would exceed $110,000. If these amounts are lessened by the amount of interest during construction, $38,145, as allowed in the physical plant, the indicated advantage to the owners of this bridge over a bridge on which construction was just starting would be $57,000 to $72,000."

Counsel for the commission very properly say on this item:

"This item * * * is actually a claim that in reconstructing this property it [the company] should be allowed a return on the entire property during the period before it is constructed and before the company's money is invested. All utility valuations make allowance to the company for the interest during the construction period on the money which has to be raised for the work before the prop-

erty is completed and is put into use. Appellant made such a claim here under the name of interest during construction. In the item of value which is entitled 'Attached Business Value,' however, it claims in addition to this sum the difference between the allowance for interest during construction and the total amount which the company would have earned had it already been engaged in the service of the public through all this period. By adding this attached business value to its interest during construction appellant is in effect claiming not only that it should be given a fair return on its property from the time it begins to serve the public but that it should be given a full fair return on all its prospective property from the moment it determines to build it and to enter the public service. Clearly, the public service should allow the company to capitalize its interest on its actual investment prior to the entrance into public service; but it may not capitalize its hopes of a fair return before it has actually begun the service of the public."

We may add that in the history of this company it appears [fol. 858] that the traffic was taken care of by the old bridge all during the construction of the new one, and the income therefrom paid to the company, and no sufficient reason appears why the public should in addition pay for the future an annual return on the money so received as part of the capital structure or fair value of the bridge.

In support of the item, "value of location," the company's engineers' report claims $100,000 as representing the estimated value that the present location of the bridge has over any other point for miles in either direction by reason of the river being narrower there, the river bed conditions favorable and neither bank occupied by railroad rights of way.

To this the commission replied:

"The original choice of the bridge site was not made by the entrepreneurs of this company, but by the Commonwealth and the company has merely taken advantage of traffic customs which the Commonwealth, through its system of highways and otherwise, has created. As in the previous consideration of this claim the commission is of the opinion that such a claim of value must be rejected for rate-making purposes,"

and counsel for the commission pertinently says:

"This contention of appellant fails to recognize the fundamental principle of public utility regulation which is to prevent a fortunately situated utility from taking advantage of its location and the public necessity for its service in order to compel the public to pay the price which it chooses to demand. * * * This claim of appellant ignores the fact that the right to operate a toll bridge across the river here or elsewhere is fundamentally the gift of the Commonwealth, contained in appellant's franchise, and to attach a value to it would be to capitalize the franchise contrary to the provisions of the statute and the frequent decisions of the court. Moreover, as has been stated, appellant's incorporators did not exercise any foresight other than that which could be expected of any prudent man when they chose this location for the building of their new bridge. The prior history of the site would [fol. 859] have made the choice of any other location an obviously foolish move. Certainly had such a choice caused the expenditure of an additional $150,000 to $200,000 as appellant's appraisers suggest it would, the additional money and possibly almost the entire investment at that location would have been regarded as an imprudent investment upon which the company would have no legal right to expect the public to produce a fair return. Appellant has merely done the thing which was most obvious and has taken advantage of traffic customs which had already been established for it and it should not be allowed to capitalize them in order to demand an increased rate from the traveling public. By the evidence of its own witnesses appellant's real estate does not have a market value of the $100,000 or more which it claims."

The appellant and appellee differ greatly on the allowance for depreciation, both as to the accrued depreciation which is to be deducted from the cost of reproduction and the yearly allowance to be made in order to restore the structure when worn out. Appellant claims that in the commission's figures the former is too great and the latter too small. Its engineers allow an accrued depreciation for the four and a half years elapsing to the time of their survey of $16,282, but claim a yearly depreciation allowance thereafter of $21,210. That is, the reproduction cost new is de-

preciated only $16,282 during the first four and a half years, but the company is entitled to $31,815 allowance for depreciation during the year and a half elapsing before the commission's engineer made his examination. The commission's engineer fixed the accrued depreciation for six years at $41,403, and the annual depreciation allowance at $6,242. The commission without fixing any specific figure for accrued depreciation, definitely refused to accept the figures of the company either for "observed depreciation" or annual depreciation; it adopted as the fair value of the bridge on the last hearing the same figures fixed by it on the first hearing, $767,800. This figure can be sustained by making a fair allowance for accrued depreciation. For [fol. 860] annual depreciation it allowed $7,678 per year, as in its first report. We said in Scranton-Spring Brook Water Co. v. P. S. C., 105 Pa. Superior Ct. 203, 225, that the allowance for annual depreciation should bear some fair relation to the accrued depreciation. We do not mean to say that they should be calculated on the same basis, for the accrued depreciation represents the actual depreciation which has occurred and which may be discovered by inspection and examination, while the annual depreciation allowance is a theoretical allowance made from year to year, which, with the accretions from interest on investment, is calculated to replace the structure when worn out; but there should be some reasonable relation between them, at least in a structure, like this, which is subject to gradual but continuous disintegration from the moment of its completion, rather than to sudden change and decay. The inspection and examination of a structure which is undergoing gradual but constant change and disintegration should not be merely an outward or superficial observation, but should take into consideration the internal changes which engineers agree are taking place in such a structure. Such an examination is to be preferred to mere calculations based on averages and assumed probabilities: McCardle v. Indianapolis Water Co., 272 U. S. 398, 416. Mr. Jacobs, one of the company's engineers, who testified on March 12, 1930, as to the annual depreciation allowance, described very clearly the chemical action that takes place in concrete when reinforced by steel, as follows:

"The general cause of depreciation of reinforced concrete is the action of water on the reinforcing steel, corro-

sion of steel set up and stress, or a chemical corrosion, which seems to eat the concrete away which is covering the steel, and you can notice it if you will inspect this bridge carefully. You will notice if you were just even to drive across slowly, you will see brown spots forming on the bridge, and those brown spots are evidence of corrosion of the steel. That is iron oxide, the brown spots, where that takes place, and that action will tend to erode or wear away [fol. 861] the concrete. That is the principal cause of depreciation. * * * Ferrous oxide and derric oxide are both spongy and light in specific gravity. They expand thus forcing and breaking away the concrete. You can find evidence of it by what we call fine, hard cracks in the concrete. * * * It has very much the same effect as freezing, that is the expanding of the water, which forms ice in changing its volume."

Mr. Jacobs testified that the life of a concrete bridge of this type was from forty to eighty years. Mr. White, another of the company's engineers, who furnished the figure as to "observed depreciation," gave its life from fifty to one hundred years. We were not impressed by his testimony as to how he arrived at a figure of $16,282. He explained, "My opinion was based upon the relative desirability of this bridge and its accessories as compared to a bridge that is built, irrespective of the age of the bridge"—whatever that may mean. And again: "The item $16,282 is in reality determined by a percentage of the total value; it was determined without giving recognition to the various defects, and other conditions of the property as observed, and that the amount relatively would be equivalent to about a two per cent deduction on the total value of the property; there being some slight cracking in parts of the bridge; there being some excess in the old parts of the bridge properties retained [that is, the fills and wing walls retained from the original bridge] that would not be exactly as reconstructed at the present time; there being some buildings that had some aging and some defects visible." He did not take into consideration the visible signs of chemical action or corrosion which Mr. Jacobs said could be discovered. His examination was admittedly only cursory and rather a surface observation than an inpsection and examination.

Mr. Curry, the commission's engineer, in his examination made in May, 1931, six years after the completion of the bridge, inspected the brown spots in the concrete, the [fol. 862] cracks in the structure, found places where the steel was exposed to view, and concluded that the actual depreciation was in line with the calculated depreciation at the end of six years under the 4% sinking fund method of calculating depreciation, on a life of forty-five years, and fixed the accrued depreciation then at $41,403. We are of opinion that the latter figure is nearer the actual accrued depreciation than the estimate of the company. Certainly no harm is done the company by fixing the fair value at $767,800, the extra allowance, over the contractor's bid, for concrete and coffer-dams being applied against accrued depreciation, especially when it is considered that of the fair value thus fixed, $21,590, allowed for expenses of removing the old piers, was not expended until subsequent to the last hearing. That amount and the seven per cent return which the company has received upon it for all these years, will more than compensate for any minor under-allowance in value.

In figuring annual depreciation allowance the company claimed an allowance of 2½% annually on the straight line method, allowing the bridge a life of forty years. Mr. Curry, the commission engineer, figured the allowance by the 4% sinking fund method, in which annual payments are made which with interest at 4%, compounded, will build a new bridge at the end of forty-five years, taken as the calculated life of the structure; although he said the bridge had a possible useful life of eighty years.

The commission adopted neither method. It allowed $7,678 annually. This sum set aside each year, with 4% simple interest will in fifty years produce approximately $767,800, sufficient to rebuild the bridge as now valued. The straight line method advocated by the company will in fifty years with 4% simple interest produce a fund twice as great as that necessary to replace the bridge. The straight line method is often used for short-lived structures, or plants of a character that they can be restored from time to time to the original condition of efficiency. It [fol. 863] is also used in calculating the federal income tax because in so doing the company charges itself with the annual interest received from the depreciation fund, which

may not be done here: City of York v. P. S. C., 85 Pa. Superior Ct. 139. It is not so fair or equitable when applied to a long-lived structure or one that is disintegrating gradually and continuously and not capable of being restored to its original condition. The company may not be required to apply the income received from the depreciation fund to make up any deficit of operation (Board of Public Utility Commissioners v. New York Telephone Co., 271 U. S. 25), but it is not entitled to an allowance, which exclusive of interest earned on the fund, will be sufficient to rebuild the bridge, when its life is done, but only to such an allowance as will with reasonable interest added make a fund sufficient to replace the bridge when it requires replacement. We think the amount allowed by the commission is fair and reasonable in the circumstances. Moreover, the commission included in its allowance for operating expenses an item of $1,800 for "maintenance."

The company claimed a return of 9% per annum on the fair value, because it alleged the bridge was subject to special danger from ice floods and freshets. The commission allowed 7%, plus the federal income tax, and a yearly allowance of $1,700 to cover freshet and flood insurance. We agree that this is fair and reasonable. The company cannot reasonably ask a payment of over $10,000 yearly to cover a risk against which it may be adequately protected by an allowed expenditure of $1,700.

Of the objections to operating expenses as allowed by the commission we shall refer to only two.

Salaries were fixed at $2,400, as in the first report. The company had been paying $4,800 but increased the salaries to $6,000. The officers are the four stockholders, each of whom receives the same salary. When the president died, [fol. 864] the vice-president was made president and the president's widow made vice-president at the same salary her husband had received. The evidence is that the bridge ran itself. The only officer who had any onerous duties to perform was the treasurer, who kept the accounts and who received for this work $1,200 extra. He also served as the president of a local bank. The commission felt that all over $2,400, which represented the salary the executives of such a self-running corporation might fairly receive, was a distribution of profits among stockholders, with tax reduction purposes in view. While we are reluctant to interfere with the salaries actually paid officials there is

much to support the commission's view and we will not disturb it.

The amount allowed by the commission for federal income tax, $3,000, is in our opinion sufficient. Appellant points out that in the year 1928 the company actually paid $8,860; but the company's gross receipts that year were $135,500, or over $50,000 more than the gross return allowed by the commission; 12% on the excess, $50,000, is $6,000, which reduces the sum paid to less than the figure allowed by the commission.

We agree with the commission that little reliance can be placed on the estimated decrease of revenues which may result from theoretical improved roads and routes north and south of the bridge. The actual receipts for 1931 were nearly 3,000 more than estimated by the engineer, equivalent to about 27,000 passengers. If there is a substantial falling away in traffic the condition can and will, on the matter being brought to its attention, permit a revision of the schedule which will take care of the decreased patronage. As a matter of fact, in the past the gross revenue has greatly exceeded the amount allowed the company; it has been distributed to the stockholders and is not considered in this proceeding: Board of Public Utility Commissioners v. New York Telephone Co., 271 U. S. 23.

For the reasons, thus stated at length, our independent judgment is that the order of the commission, allowing [fol. 865] appellant a gross annual revenue of $84,124, is reasonable and in conformity with law, with the exception that the item of $1,331 for bond amortization should not have been excluded.

The allowances should have been:

Fair return (7% upon $767,800)	$53,746
Operating expenses	22,700
Annual depreciation	7,678
Annual bond amortization	1,331
Total annual gross revenue	85,455

We are not convinced that the order appealed from requires any other change or modification.

It is, accordingly, modified by substituting an annual gross revenue of $85,455 instead of $84,125, and, as thus modified, is affirmed and the appeal dismissed.

[fol. 866] IN SUPREME COURT OF PENNSYLVANIA

No. —, —— Term, 1933

CLARK'S FERRY BRIDGE COMPANY, Appellant,

vs.

THE PUBLIC SERVICE COMMISSION OF THE COMMONWEALTH OF PENNSYLVANIA

PETITION OF CLARK'S FERRY BRIDGE COMPANY FOR THE ALLOWANCE OF AN APPEAL FROM THE JUDGMENT OF THE SUPERIOR COURT AT NO. 2, MARCH TERM, 1933—Filed March 27, 1933

To the Honorable the Chief Justice and Associate Justices of the Supreme Court of Pennsylvania:

The petition of Clark's Ferry Bridge Company, appellant, respectfully represents:

1. That your petitioner was the Appellant in an appeal to the Superior Court of Pennsylvania (No. 2 March Term, 1933) from the order of The Public Service Commission of the Commonwealth of Pennsylvania in Complaint Docket No. 8219, made February 2, 1932, fixing the rates thereafter to be charged by the Appellant for the service rendered by it to the public. This order was made after an investigation by the Commission, on its own motion, to determine the reasonableness of the Company's rates; and was the second rate proceeding in which this Company was involved. A brief history of both proceedings is essential to an understanding of the questions involved.

2. Prior to 1925 the Appellant owned and operated a wooden toll bridge across the Susquehanna at Clark's Ferry in Dauphin County, Pa. On June 10, 1924, it let a contract for, and on May 30, 1925, opened to traffic, a new concrete bridge. The rate then charged for ordinary automobiles, which formed the major part of the traffic, was [fol. 867] 25 cents. On August 11, 1925, a complaint was filed by George A. Herring, et al., alleging that the rates were unreasonable. This complaint was docketed to Complaint Docket No. 6611. Hearings were had before the Commission at which the Company sought to establish for

its property a reproduction cost new of $1,019,993. According to the contention of the Company the actual cost to it of the new bridge structure had been $754,751, and the value of that part of the old bridge property which remained used and useful, was $52,101. But the Company contended that the cost of reproduction would be greater than this original cost, and sought to prove this by showing that the contractor had lost $61,140 on his labor and materials only, $82,000 on his overhead, depreciation and plant charge, and $70,000 additional which would have been his fair profit on the contract. The sum of these items made up the $1,019,993 which the Company claimed as the fair present value of its property.

On June 8, 1926, the Commission filed its report and order in which it found that the rates were unreasonable, that the fair value of the Respondent's property for rate purposes was $767,800 and that its allowable gross revenue was $85,905. Based upon these underlying findings, the Commission directed the Company to file a new tariff, and suggested a reduction of the 25 cent rate to 15 cents.

An appeal was taken by the Company to the Superior Court which was argued at Philadelphia in November, 1926, and on December 13, 1926, that court directed a reargument, with special reference to depreciation, to be heard at Harrisburg in March, 1927.

Meanwhile conditions had so changed that, regardless of the finding which the Superior Court might have made upon the question of valuation, the order itself, with the 15 cent rate was reasonable. The Company therefore withdrew its appeal and filed a new tariff fixing a 15 cent rate, which tariff was accepted by the Commission as a compliance with its order.

[fol. 868] On July 1, 1929, the appellant further reduced its rates for ordinary automobiles to 10 cents.

On January 14, 1930, the Commission, on its own motion, began the present proceeding. At the hearings the Commission, assuming the burden of proof, offered in evidence the Report and Order of the Commission in the prior case and the annual reports of the Company for 1926, 1927 and 1928. It then offered a detailed report of an examination of the Company's accounts and books, which had been prepared by one of the Commission's accountants, and rested its case. The Company offered in evidence a complete ap-

praisal of the reproduction cost new and accrued depreciation of its property, made by engineers of the American Appraisal Company, offered the oral testimony of Frank M. Masters, the engineer who had constructed the bridge, and other testimony. The Commission, in rebuttal, called one of its engineers who offered in evidence his appraisal of the reproduction costs new and accrued depreciation of the property.

On February 2, 1932, the Commission filed the Report and Order from which the present appeal was taken. The Report discussed some of the evidence offered, but contained no findings as to the reproduction cost or fair value of any items into which the engineers on both sides had divided the property. It declared that the valuation of the property, $767,800, made by it in the former case, was conclusive upon the Company, and should not be reopened, because it did not appear that there was any increase in the level of prices for labor and materials since the first inquiry was made. Its order directed the filing of a tariff reducing the rate for ordinary automobiles from 10 cents to 8 cents, with still lower rates to frequent users of the service.

An appeal was then taken from this order by the Company to the Superior Court to No. 2, March Term, 1933, which appeal was dismissed by that court in an opinion filed March 17, 1933, a copy of which opinion is attached to this petition and marked "Exhibit A".

[fol. 869] 3. The questions involved in the appeal which your petitioner now prays for, are as follows:

(a) Upon a former complaint against the rates of the Appellant, the Public Service Commission made an order directing it to reduce its rates, and, as an incident thereto, found the fair value of its property. The Company appealed from this order to the Superior Court. While this appeal was pending, and before the time fixed for reargument in the Superior Court, conditions, not affecting the fair value of the property, had so changed as to make the order reasonable. Because of this change of conditions the Company withdrew its appeal, reduced its rates, as directed, and three years later voluntarily made further reductions. Six months thereafter the Commission instituted the present complaint on its own motion. Upon hearing, the Com-

any presented evidence to show that the former finding of fair value was confiscatory, but did not show any change in price levels or construction conditions. Was the finding of fair value in the former proceeding res adjudicata or conclusive upon the Company in the subsequent proceeding?

(b) Was there competent and substantial evidence before the Commission and the Supreme Court to sustain the valuation of the Appellant's property at $767,800?

(c) Is the finding of the Commission and the judgment of the Superior Court fixing the value of the Appellant's property at $767,800, confiscatory and in violation of the due process and equal protection clauses of the Fourteenth Amendment to the Constitution of the United States?

(d) Was there competent and substantial evidence before the Superior Court to sustain its finding that the allowable gross revenue of the Appellant is $85,455?

(e) Is the judgment of the Superior Court, fixing the allowable gross revenue of the Appellant at $85,455, confiscatory and in violation of the due process and equal protection clauses of the Fourteenth Amendment to the Con-
[fol. 870] stitution of the United States?

4. The reasons and arguments in favor of the allowance of this appeal are:

(a) The question as to what extent a finding of fair value made by the Public Service Commission in a rate case may be conclusive in a subsequent rate case, has not been decided by this Court.

The Appellant contends that the Public Service Commission, in determining the reasonableness of rates, performs a legislative function. In order to exercise this function and to reach a conclusion as to the reasonableness of rates, it must hear and determine many subordinate matters, among which is the fair value of the property used and useful in the public service. The findings which it makes upon these subordinate matters are not res adjudicata, nor conclusive, in later proceedings. The order which the Commission makes, declaring rates to be reasonable or unreasonable, is conclusive, unless appealed from, for the statute so provides. But the subordinate findings upon which that order is based, are not conclusive. They are

similar to the findings of a legislative committee which has under consideration the recommendation of a bill pending in the House or Senate.

The parties to a rate case before the Commission are bound by the rates fixed, but not by the findings on which that conclusion was based. If it were so, then any company which might be satisfied with the rates fixed by the Commission, would be obliged to appeal to the Superior and Supreme Courts if perchance it were not satisfied with some subordinate finding which the Commission had made.

The Commission and the Superior Court, in the instant case have held that a finding of the value of the property of a utility in a rate proceeding, is conclusive in a subsequent proceeding, unless the evidence shows a change of price levels or construction conditions. We contend that it is sufficient to show in the subsequent proceeding that the value fixed in the former proceeding was erroneous.

[fol. 871] (b) We believe that both the Commission and the Superior Court, have given controlling weight to original cost or investment, and have not given due weight to reproduction cost, in determining fair value.

(c) With respect to certain items of the inventory of bridge structure, particularly with respect to concrete for arches and approach fill, the findings of the Commission and the Superior Court are not supported by competent and substantial evidence.

(d) With respect to Indirect Construction Costs and Intangible Costs—those items of value frequently referred to as "overheads"—the Commission based its findings upon the testimony of an engineer who admitted on cross-examination that he had omitted some elements of value altogether, and that others he had fixed at less than actual cost. The Superior Court seems to have ignored his testimony and based its findings for these items solely on historical cost. Both conclusions, be believe, were erroneous.

(e) Both the Commission and the Superior Court refused to allow any value for the strategic position of the Appellant's real estate, which position gives it peculiar value for the purposes for which it is used. We believe that this Court, in Erie City v. Public Service Commission, 278 Pa.

512, recognized that some allowance must be made for such value.

(f) The Commission and the Superior Court allowed for annual depreciation only 1% of the fair value of the property. Two competent and experienced engineers testified and gave substantial reasons in support of an annual depreciation allowance of 2% to 2½% on the straight line basis. The Commission had no other evidence before it, for the only engineer called as a witness by the Commission declined to express any opinion on this subject.

(g) The Appellant contended before the Commission and the Superior Court, and now contends that the valuation and the allowable gross revenue fixed by the Commission [fol. 872] and the Superior Court, are confiscatory and in violation of the due process and equal protection clauses of the Fourteenth Amendment to the Constitution of the United States.

5. Copies of the briefs and record in the Superior Court are filed herewith.

Wherefore Clark's Ferry Bridge Company, Appellant and petitioner, respectfully prays that it be allowed to appeal from the judgment of the Superior Court to the Supreme Court, upon the questions hereinbefore in paragraph three (3) set forth.

Clark's Ferry Bridge Company, by Snyder, Miller, Hull and Hull, Attorneys.

[fol. 873] *Duly sworn to by Christian W. Lynch. Jurat omitted in printing.*

[fol. 874] EXHIBIT "A"

Attached hereto as Exhibit "A" was a copy of the opinion of the Superior Court of Pennsylvania filed March 17, 1933 to No. 2, March Term 1933 and by stipulation of counsel omitted because already included herein at pages 838 to 865 inclusive.

[fol. 875] (Endorsement)

And now, March 29th, 1933, upon consideration of the within petition a rule is granted on defendant to show

cause why an appeal should not be allowed as prayed for. Returnable April 10, 1933.

Per Curiam. F.

[File endorsement omitted.]

[fol. 876] ORDER OF THE SUPREME COURT OF PENNSYLVANIA REFUSING APPEAL

(Endorsement)

1933, April 11.—Appeal refused. Per Curiam. S.

[fol. 877] IN SUPREME COURT OF PENNSYLVANIA

[Title omitted]

PETITION OF THE PUBLIC SERVICE COMMISSION OF THE COMMONWEALTH OF PENNSYLVANIA FOR THE ALLOWANCE OF AN APPEAL FROM THE JUDGMENT OF THE SUPERIOR COURT AT No. 2, MARCH TERM, 1933—Filed March 29, 1933

To the Honorable the Chief Justice and Associate Justices of the Supreme Court of Pennsylvania:

The petition of the Public Service Commission of the Commonwealth of Pennsylvania respectfully represents:

(1) That your petitioner was the appellee in an appeal by the Clark's Ferry Bridge Company to the Superior Court of Pennsylvania at No. 2 March Term 1933 from the order of said Commission at its Complaint Docket No. 8219 dated February 2, 1932, fixing the rates thereafter to be charged by said appellant for the service rendered by it to the public. This order was made upon a formal investigation by the Commission on its own motion to determine the reasonableness of the company's rates and was based upon evidence on direct and cross-examination bearing upon the value of said appellant's property used and useful in the public service, together with similar evidence of record in a prior proceeding before said Commission dealing with the reasonableness of the rates of said appellant.

(2) The Clark's Ferry Bridge Company, appellant before the Superior Court, has filed its petition praying your

Honorable Court to receive and hear an appeal from the [fol. 878] judgment of the Superior Court which over-ruled all the points raised by said appellant and sustained the action of the Commission upon all such issues. The petition of said company for the allowance of an appeal contends that the points which it raises bring into question whether or not the findings of the Commission and the judgment of the Superior Court confiscate the property of said company without due process of law in contravention of the Fourteenth Amendment to the Constitution of the United States. The Public Service Commission avers that its findings and the judgment of the Superior Court upon all such points were just and reasonable, in accordance with the weight of the evidence and in conformity with law, but it concedes that said appellant's contentions raise the question of confiscation.

(3) Reference is made herein to the petition for the allowance of an appeal filed by the Clark's Ferry Bridge Company and to the history of the proceeding and exhibits attached thereto. A copy of the opinion of the Superior Court is attached hereto.

(4) From the record of the prior proceeding before the Commission, which was incorporated into that of the latter proceeding on the Commission's own motion, it appears that about 1924 appellant company floated an issue of first mortgage fifteen-year 6% Bonds of a par value of $450,000. These bonds were sold to the brokers at 87 and were in turn disposed of to the public at 94. In 1929 these bonds were called in at a premium and were refunded by the issuance and pledge of a second group of bonds. In the order of the Commission which was reviewed by the Superior Court the Commission allowed the company as a capital item upon which profits should be earned the sum of $31,500, being the brokerage charge contained in the difference between the price at which the bonds were sold to the public and that received from the brokers. No allowance was made to the company in any manner for the dif- [fol. 879] ference between the price of 94 at which the bonds were sold to the public and their par value.

(5) The difference between the par value of securities issued and the price which they will command from the public on the securities market is known as discount or premium

as the case may be. It is wholly distinct and different in nature from the actual sales expense or brokers' charge. The sales expense is known as brokerage and is included in the allowances for the cost of financing, a part of the capital investment of the company. Bond discount or premium is not a necessary expense but its existence depends entirely on the rate of interest which the company is willing to pay as compared to the attractiveness of its securities as an investment. As the interest rate on the bonds is decreased the price which the particular bonds will command on the market decreases and the amount of bond discount increases. Had the Clark's Ferry Bridge Company deemed it advisable to pay a higher rate of interest or had its securities been more attractive this discount would not have been necessary. Bond discount is therefore commonly regarded by regulatory commissions as being merely another form of bond interest and is consequently required to be paid by the company out of the fair return allowed. This is necessary and proper inasmuch as the property included in the valuation includes that which is paid for by bondholders' money as well as that paid for by the stockholders themselves.

(6) The Commission in its report and order stated (Record 26a) that it would make no allowance for bond discount and that appellant company had not asked for any. Neither appellant company nor the Commission made any reference to bond discount or the amortization of it in either the briefs submitted to the Superior Court or in oral argument. Nevertheless that Court in the exercise of its independent judgment felt called upon expressly to allow appellant company the sum of $1,331 per year as an amortiza- of the $27,500 discount originally incurred in the sale of the com- [fol. 880] pany's bonds. This action, your petitioner contends, was in error.

(7) The questions involved in the appeal for which your petitioner prays are as follows:

(a) Is an order of the Public Service Commission which does not allow as an annual operating expense any amount to amortize a discount on bonds which has been incurred due to the fact that the interest rate offered on the face or par of such bonds is not sufficient to enable them to sell at par, confiscatory so as to constitute a taking of said com-

pany's property in contravention of the provisions of the Fourteenth Amendment to the Constitution of the United States?

(b) Is such an order of the Commission reasonable and proper?

(8) The questions raised herein should be reviewed by your Honorable Court because (a) discount on bonds is involved in a large majority of all the valuation rate cases which arise within this Commonwealth, and for a period of approximately ten years it has not been the custom of the Public Service Commission to make any allowance for the amortization of such discount, so that the action of the Superior Court, made without having heard argument thereon from any party before it, is a precedent completely reversing an established principle of regulation; (b) if an appeal is heard by your Honorable Court upon the questions raised by the corporate appellant, a consideration of this specific question is necessary to round out and complete the entire question of confiscation.

Wherefore the Public Service Commission of the Commonwealth of Pennsylvania, appellant and petitioner, respectfully prays that if an appeal is allowed to the Clark's Ferry Bridge Company from the judgment of the Superior [fol. 881] Court to the Supreme Court upon the questions raised by it, a similar appeal be allowed to this petitioner upon the questions set forth in paragraph (7) herein.

The Public Service Commission of the Commonwealth of Pennsylvania, by E. Everett Mather, Jr., Assistant Counsel. John Fox Weiss, Counsel.

Duly sworn to by Louis Tevell. Jurat omitted in printing.

[fol. 882] EXHIBIT "A"

Attached hereto as Exhibit "A" was a copy of the opinion of the Superior Court of Pennsylvania filed March 17, 1933, to No. 2, March Term, 1933, and by stipulation of counsel omitted because already included herein at pages 838 to 865 inclusive.

[fol. 883] (Endorsement)

And now, March 30, 1933, upon consideration of the within petition, a rule is granted on plaintiff to show cause why an appeal should not be allowed as prayed for. Returnable April 10, 1933. Per Curiam.

1933, April 11.—Appeal refused. Per Curiam. S.

[File endorsement omitted.]

And now, March 29, 1933, service of the within petition is accepted and receipt of a copy thereof acknowledged.

Snyder, Miller, Hull and Hull, Counsel for Clark's Ferry Bridge Co.

[fol. 884] IN SUPREME COURT OF PENNSYLVANIA, MIDDLE DISTRICT

[Title omitted]

ANSWER OF THE PUBLIC SERVICE COMMISSION OF THE COMMONWEALTH OF PENNSYLVANIA TO RULE TO SHOW CAUSE

To the Honorable the President Judge and Judges of the Supreme Court of Pennsylvania:

And now, to-wit, comes The Public Service Commission of the Commonwealth of Pennsylvania by its counsel and in answer to the rule to show cause granted upon the petition of the Clark'- Ferry Bridge Company for the allowance of an appeal herein avers that it has no objection to the granting of such petition if an appeal is also allowed upon the petition of the Commission, and both appeals are consolidated for argument during the week of May 22, 1933.

And it will ever pray, etc.

The Public Service Commission of the Commonwealth of Pennsylvania. E. Everett Mather, Jr., Assistant Counsel. John Fox Weiss, Counsel.

March 30, 1933.

[fol. 885] IN SUPREME COURT OF PENNSYLVANIA, MIDDLE DISTRICT

[Title omitted]

ANSWER OF THE CLARK'S FERRY BRIDGE COMPANY TO RULE TO SHOW CAUSE

To the Honorable the Chief Justice and Associate Justices of the Supreme Court of Pennsylvania:

And now, to wit, comes Clark's Ferry Bridge Company by its counsel and in answer to the rule to show cause granted upon the petition of The Public Service Commission of The Commonwealth of Pennsylvania for the allowance of an appeal, herein avers that it has no objection to the granting of such petition if an appeal is also allowed upon the petition of Clark's Ferry Bridge Company, and both appeals are consolidated for argument.

Counsel for Clark's Ferry Bridge Company, appellee, aver however, that the questions to be presented to the Supreme Court upon the appeals now prayed for differ materially from those presented to the Superior Court and there will not be sufficient time between the allowance of these appeals and May 22, 1933 to present these questions adequately.

Clark's Ferry Bridge Company. George Ross Hull, Snyder, Miller, Hull & Hull, Counsel.

April 10, 1933.

[fol. 886] IN SUPREME COURT OF PENNSYLVANIA

[Title omitted]

PETITION OF CLARK'S FERRY BRIDGE COMPANY TO STAY THE REMISSION OF THE RECORD PENDING AN APPLICATION FOR APPEAL OR CERTIORARI TO THE SUPREME COURT OF THE UNITED STATES—Filed April 13, 1933

To the Honorable the Chief Justice and Associate Justices of the Supreme Court of Pennsylvania:

The petition of Clark's Ferry Bridge Company, appellant, respectfully represents:

1. That your petitioner heretofore presented to your Honorable Court its petition for the allowance of an appeal from the judgment of the Superior Court entered by that Court to No. 2 March Term, 1932 on March 17, 1933.

2. That on April 11, 1933 your Honorable Court entered the following order upon said petition:

"1933, April 11, Appeal refused. Per Curiam. S."

3. That the effect of the refusal of your Honorable Court to allow the said appeal is to declare that the decision of The Public Service Commission and the Judgment of the Superior Court, appealed from are not in conflict with the due process and equal protection clauses of the Fourteenth Amendment to the Constitution of the United States.

[fol. 887] 4. That it is the intention of your petitioner to apply to the Supreme Court of the United States for a writ of error, appeal, or writ of certiorari, to review the decision of the Superior Court and of your Honorable Court upon the questions arising in said case under the Fourteenth Amendment of the Constitution of the United States.

5. That pursuant to Rule 88 of your Honorable Court, the record in the above entitled case will be remitted to The Public Service Commission of the Commonwealth of Pennsylvania forthwith unless otherwise ordered by your Honorable Court.

6. That it is the desire of your petitioner that the record in said case should not be remitted to The Public Service Commission of the Commonwealth of Pennsylvania pending the preparation and submission of the papers necessary to be prepared and submitted in connection with the taking and perfecting of an appeal or petition for writ of certiorari to the Supreme Court of the United States.

Wherefore Clark's Ferry Bridge Company, appellant, respectfully prays that an order be granted directing the Prothonotary of your Honorable Court to withhold, and not to remit, the record in the above proceeding to The Public Service Commission of the Commonwealth of Pennsylvania for a period of sixty (60) days, within which your petitioner may take and perfect its appeal or petition for

writ of certiorari to the Supreme Court of the United States.

And your Petitioner will ever pray.

Geo. Ross Hull, Snyder, Miller, Hull & Hull, Attorneys for Clark's Ferry Bridge Co., Appellant.

Duly sworn to by P. F. Duncan. Jurat omitted in printing.

April 17.

The within petition remitted to Superior Court.

Per Curiam. F.

[File endorsement omitted.]

SUPREME COURT OF THE UNITED STATES

CLARK'S FERRY BRIDGE COMPANY, Appellant,

vs.

THE PUBLIC SERVICE COMMISSION OF THE COMMONWEALTH OF PENNSYLVANIA

PETITION FOR APPEAL, ASSIGNMENT OF ERRORS, AND PRAYER FOR REVERSAL—Filed June 16, 1933

Petition for Appeal

Clark's Ferry Bridge Company, the appellant herein, considering itself aggrieved by the final decision of the Superior Court of Pennsylvania in the above entitled cause, hereby prays that an appeal therefrom to the Supreme Court of the United States be allowed, and that an order be made fixing the amount of the bond thereon.

Assignment of Errors

And the said Clark's Ferry Bridge Company, appellant, assigns the following errors in the record and proceedings in the said case:

1. The Superior Court of Pennsylvania erred in finding that the fair value of the appellant's property was $767,800, and in refusing to find that the order of the Public Service Commission based upon that valuation was confiscatory

and in violation of the due process clause of the Fourteenth Amendment to the Constitution of the United States.

2. The Superior Court of Pennsylvania erred in finding that the gross annual revenue to which the appellant was entitled was $85,455, and in refusing to find that the order of the Public Service Commission was confiscatory and in violation of the due process clause of the Fourteenth Amendment to the Constitution of the United States.

3. The Superior Court of Pennsylvania erred in giving controlling weight to the original cost paid by the appellant for its property, as found by the Public Service Commission in 1926 in a prior proceeding, and in failing to give due weight (1) to the fact that the actual cost of construction was greater than the amount which the appellant paid, and (2) to the cost of reproduction as of the time of the inquiry.

4. The Superior Court of Pennsylvania erred in finding that $26 per cubic yard of concrete used in arch rings, walls, etc. (Item 10 of Inventory) was a reasonable unit price to be used in estimating the reproduction cost of the appellant's bridge property.

5. The Superior Court of Pennsylvania erred in finding that .046 cents per pound of reinforcing steel bars (Item 17 of Inventory) was a reasonable unit price to be used in estimating the reproduction cost of the appellant's bridge property.

6. The Superior Court of Pennsylvania erred in approving the finding of the Public Service Commission that the value of certain earth fill, which formed part of a former bridge structure and which was used, useful and necessary to the present bridge structure, should be depreciated because it was second hand.

7. The Superior Court of Pennsylvania erred in its valuation of the appellant's property, in giving controlling weight to the intangible costs and indirect construction costs actually paid by the appellant, and in giving no weight to the estimates of such costs which would necessarily be incurred in the reproduction of the property new as of the time of the inquiry.

8. The Superior Court erred in finding that the appellant was not entitled to a fair return upon the special value

which is inherent in its real estate because of its favorable location for bridge purposes.

9. The Superior Court erred in finding that an allowance of $7,678 for annual depreciation was fair and reasonable to the appellant.

10. The Superior Court erred in finding that a return of seven per cent of the appellant's property was a fair and reasonable return to the appellant.

11. The Superior Court of Pennsylvania erred in affirming the order of the Public Service Commission and dismissing the appellant's appeal.

Prayer for Reversal

For which errors, the appellant, Clark's Ferry Bridge Company, prays that the final judgment of the Superior Court of Pennsylvania in the above entitled cause, be reversed, and a judgment rendered in favor of the appellant, and for costs.

Geo. Ross Hull, Counsel for Appellant.

In Superior Court of Pennsylvania

Order Refusing Appeal

Now, June 14, 1933, appeal refused.

(Signed) Frank M. Trexler, President Judge of the Superior Court.

In Supreme Court of the United States

Order Allowing Appeal

And now, June 15, 1933, an appeal is allowed upon the filing of a bond in the sum of $2,000.

(Signed) Owen J. Roberts, Associate Justice of the Supreme Court of the United States.

[File endorsement omitted.]

Citation, in usual form, showing service on John F. Weiss et al., filed June 16, 1933, omitted in printing.

Bond on appeal for $2,000, approved and filed June 16, 1933, omitted in printing.

IN SUPREME COURT OF THE UNITED STATES

ORDER APPROVING BOND AND AWARDING SUPERSEDEAS—Filed June 16, 1933

And now, June 15, 1933, it appearing that a bond in the penal sum of Fifty Thousand ($50,000) Dollars, with good and sufficient surety has heretofore been approved and filed in the Superior Court of Pennsylvania and now remains in full force and effect, conditioned that Clark's Ferry Bridge Company shall repay, after demand, to all aggrieved parties who may be damaged by its failure to comply with the order of The Public Service Commission appealed from, any excess over the rate or charge fixed by The Public Service Commission which shall be received by said Clark's Ferry Bridge Company; it is ordered and decreed that the said bond be and remain in full force and effect until the final disposition of the appeal of Clark's Ferry Bridge Company to the Supreme Court of the United States; and that the foregoing bond in the penal sum of Two Thousand Dollars ($2,000) be, and the same is hereby, approved; and it is further ordered and decreed that the said appeal shall be a supersedeas.

Owen J. Roberts, Associate Justice of the Supreme Court of the United States.

[File endorsement omitted.]

SUPREME COURT OF THE UNITED STATES

STATEMENT OF POINTS TO BE RELIED ON BY THE APPELLANT AND DESIGNATION OF PORTIONS OF THE RECORD TO BE PRINTED—Filed July 18, 1933

1. The judgment of the Superior Court of Pennsylvania fixing the fair value of the appellant's property at $767,800

and the maximum annual gross revenue which it might receive, at $85,455, is confiscatory and in violation of the due process clause of the Fourteenth Amendment to the Constitution of the United States. The fair value of the appellant's property is approximately $1,000,000, and the annual income to which it is entitled is in excess of $130,000.

2. The judgment of the Superior Court gave controlling weight to the original cost actually paid by the appellant for its property, as found by the Public Service Commission in 1926 in a prior proceeding. Due weight must be given (1) to the fact that the actual cost of construction was greater than the amount which the appellant paid, and (2) to the cost of reproduction at the time of the inquiry.

3. There was no competent evidence before the Public Service Commission and the Superior Court of Pennsylvania to support the finding that $26 per cubic yard of concrete in arch rings, walls, etc. (Item 10 of Inventory) was a reasonable unit price to be used in estimating the reproduction cost of the appellant's bridge property.

4. There was no competent evidence before the Public Service Commission and the Superior Court of Pennsylvania to support the finding that .046 cents per pound of reinforcing steel bars (Item 17 of Inventory) was a reasonable unit price to be used in estimating the reproduction cost of the appellant's bridge property.

5. There was no evidence whatever before the Public Service Commission and the Superior Court of Pennsylvania to support the finding that the value of certain earth fill, which formed part of a former bridge structure and which was used, useful and necessary to the present bridge structure, should be depreciated because it was second hand.

6. In the valuation of the appellant's property the judgment of the Superior Court of Pennsylvania gave controlling weight to the intangible costs and indirect construction costs actually paid by the appellant, (excluding, however, a discount of $10,000 on the sale of preferred stock which was actually paid). Due weight must be given to the estimates of such costs which would necessarily be incurred in the reproduction of the property new as of the time of the inquiry.

7. If controlling weight be given to the intangible costs and indirect construction costs actually paid in the construction of the appellant's bridge property, then there must be included all such costs as were actually paid, including a discount of $10,000 on the sale of preferred stock, which was actually paid by the appellant.

8. The appellant is entitled to earn a fair return upon the special value which is inherent in its real estate (bridge head lands) because of its favorable location for bridge purposes.

9. There was no evidence before the Public Service Commission and the Superior Court of Pennsylvania to support an allowance of $7,678, which was 1% of the value placed by them upon the appellant's bridge property.

10. The amount of annual depreciation charged against the earnings of the appellant, belongs to the investors in the enterprise, and not to the public. It constitutes a return of capital to the investors, and the amount of such annual allowance cannot be reduced because of interest which may be earned, from time to time upon such capital.

11. A return of only seven per cent is confiscatory in the case of a toll bridge property, which is exposed to unusual physical and economic hazards, and which requires a higher rate of return in order to attract capital.

Geo. Ross Hull, Counsel for the Appellant.

And the appellant further states that only the following parts of the Record as filed in this court need be printed by the Clerk for the hearing in the case:

(Two volumes of the Record as filed to No. 2, March Term, 1933, in the Superior Court of Pennsylvania are already in print and 35 copies of each of these volumes have been furnished to the Clerk of the United States Supreme Court for use in this appeal.)

Pages.

1. Opinion of the Superior Court of Pennsylvania filed to No. 2, March Term, 1933 839–866
2. Petition for appeal by Clark's Ferry Bridge Co. to the Supreme Court of Pennsylvania 867–875
3. Order of Supreme Court of Pennsylvania denying appeal 877
4. Petition for appeal, assignment of errors and prayer for reversal 892–894
5. Order of the President Judge of the Superior Court of Pennsylvania denying an appeal 895
6. Order of Mr. Justice Roberts allowing appeal 895
7. Citation 898–899
8. Statement as to jurisdiction 900–907
9. Bond on appeal and order approving the same and awarding supersedeas 908–910
10. Acceptance of service of petition for appeal, order allowing appeal, assignments of error, and statement as to jurisdiction 896–897
11. Statement of points to be relied on by the appellant.

Geo. Ross Hull, Counsel for the Appellant.

Acceptance of Service of Designation of Points to be Relied Upon and Parts of the Record Necessary for Their Consideration

To the Public Service Commission of the Commonwealth of Pennsylvania, Appellee:

Pursuant to Rule 13, paragraph 9, Rules of the Supreme Court of the United States, you are hereby served with a copy of the Statement of Points to be relied upon by the appellant and the portions of the record necessary to be printed for their consideration.

Geo. Ross Hull, Counsel for the Appellant.

Service acknowledged this 14 day of July, 1933.

John Fox Weiss, Counsel; E. Everett Mather, Jr., Assistant Counsel, for the Public Service Commission of the Commonwealth of Pennsylvania, North Office Building, State Capitol, Harrisburg, Pa.

[File endorsement omitted.]

SUPREME COURT OF THE UNITED STATES

APPELLEE'S STATEMENT OF ADDITIONAL PARTS OF THE RECORD WHICH IT DEEMS MATERIAL—Filed July 18, 1933

The Public Service Commission of the Commonwealth of Pennsylvania, appellee herein, suggests that the following parts of the record certified to the Court are material to a determination of the issues involved:

	Pages
(1) Statements of Income and Operating Expenses of Clark's Ferry Bridge Co. for months of July 1929 to February 1930	799a–806a, incl.
(2) Statements of operating expenses and net income Clark's Ferry Bridge Co. for the months of March 1930 to Feb. 1931	807a–818a, incl.
(The statements of income for these months are printed in the Record printed and filed to No. 2, March Term, 1933, pages 476a-484a, inclusive.)	
(3) Statements of income and operating expenses Clark's Ferry Bridge Company for the months March 1931 to Dec. 1931, inclusive	819a–828a, incl.
(4) Appellee's statement of matter making against jurisdiction of the Supreme Court of the United States and motion to dismiss or affirm	915a–922, incl.

Respectfully submitted.

E. Everett Mather, Jr., Assistant Counsel; John Fox Weiss, Counsel for the Public Service Commission of the Commonwealth of Pennsylvania.

North Office Building, Harrisburg, Penna.
July 15, 1933.

Acceptance of Service of Designation of Additional Parts of the Record Which Appellee Believes Necessary for a Consideration of the Issues Involved

To the Clark's Ferry Bridge Company, appellant:

Pursuant to Rule 13, paragraph 9, Rules of the Supreme Court of the United States, you are hereby served with a

copy of Appellee's statement of additional portions of the record which appellee believes necessary for a consideration of the issues involved.

John Fox Weiss, Counsel; E. Everett Mather, Jr., Assistant Counsel, for the Public Service Commission of the Commonwealth of Pennsylvania.

North Office Building, Harrisburg, Penna.
July 15, 1933.

Service acknowledged this 15th day of July, 1933.
Geo. Ross Hull, Counsel for the Appellant.

[File endorsement omitted.]

Endorsed on cover: File No. 37,877. Pennsylvania Superior Court. Term No. 274. Clark's Ferry Bridge Company, appellant, vs. The Public Service Commission of the Commonwealth of Pennsylvania. Filed July 18, 1933. File No. 274, O. T., 1933.